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CITY HALL, ST. LOUIS, MO.

MUNICIPAL LIGHTING AT ST. LOUIS

Six Municipal Plants for Lighting Public Buildings and to Operate a Municipal Railway—Nearly Thirty Thousand Dollars Saved to the City by These Plants

By CHARLES CLAUDE CASEY

THE city of St. Louis, Mo., is operating four small municipal lighting plants, three of them with a capacity of about 800,000 kilowatt hours per year. The fourth, used by the Water Department in its plants (also municipal) and to operate seven miles of municipal railway, has a very much larger capacity. Besides these four successful plants, two others are being installed. The fifth, which is now operating in a small way pending further equipment, is located at the Industrial School, and will light, besides that institution, the workhouse and several sta-

tions of the Fire Department. One plant is located at the new City Hall and lights that building; the old City Hall, new Central District Police Station, Four Courts, Court House, the jail, and several engine houses. Another is located at the Insane Asylum (the only city institution of the kind in the country), and besides that building, lights the Poor House and Female Hospital (all immense buildings), and several fire engine houses. Another is located at the new City Hospital, now comprising seven of a total of fourteen large buildings which are to eventually com-

prise the institution, and also lights stations of the fire department. Police stations in different parts of the city also are lighted where convenient. The sixth plant is now being installed at the Quarantine Hospital, an extensive but isolated institution outside of the city proper.

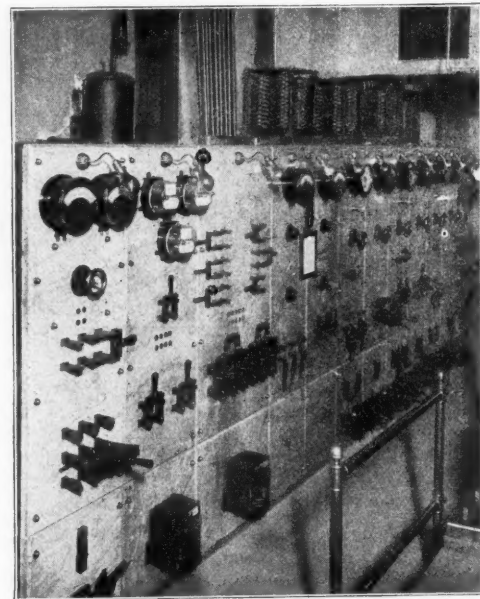
So successful has been the operation of the several small plants that business, civic and public improvement associations have been agitating the municipal ownership of an immense plant to light the streets and parks, now costing three-quarters of a million dollars a year under contract. So popular has this feeling become that some of the present city officials were elected on a ticket with a municipal lighting plant as one of the principal planks in the platform. By popular consent of the people a fund of \$140,000 a year has been ordered set aside to pay the expenses of installing such a plant, which would cost a sum equal to the contract price of lighting the city for three or four years.

The city was practically driven to municipal ownership as a protection to itself and is now finding the venture so popular, so profitable and so easy under the administration of the past few years that it is officially considering the much more important venture mentioned. Prior to 1901 the city was paying the unreasonable sum of 13 cents per kilowatt hour for its light in all of its public buildings. There was not a semblance of competition in the contracts, the lighting company having absorbed all its competitors. It was then that the municipal ownership spirit rose up and demanded relief. An ordinance was prepared by the Board of Public Improvements and passed by the Municipal Assembly authorizing the construction of two plants, one at the new City Hall and one at the Insane Asylum.

The move was a hard blow to the lighting corporation and a hard fight was put up against the passage of the measure. The fight failed, however, and as a last resort the company threatened to cut off the current at the expiration of its contract—allowing only three months in which to put the two plants in operation—and refuse to bid on renewal. This argument so impressed the mayor that he vetoed the ordinance. This was in June, 1901. The contract, let at the regular time in September, was a surprise to everyone, the lighting company coming down in its price from 13 to 6 1-4 cents per kilowatt.

Everything was lovely and municipal ownership slumbered until the end of that contract, when the lighting company raised the price to 7 1-2 cents. The wrath of municipal ownership advocates broke out anew and the ordinance vetoed by the mayor was re-introduced, passed by the Municipal Assembly, signed by the mayor (the same who had vetoed it before) and the plants were put in operation in July, 1903. The following contract with the lighting company for the other buildings dropped from 7 1-2 to 5 cents, and in 1904 a further drop was made to 4 1-2 cents, at which it has stood since that time. Other plants quickly supplemented those two, and municipal ownership was pronounced a success, at least in creating the competition which brought the lighting company to terms. Even if it had to light the two buildings at a loss on the basis of 4 1-2 cents, the reduction secured in the

balance of the contract would justify the move, the cost for lighting the remaining buildings by contract having been reduced from \$100,000 to \$50,000 a year. That the plants are not a failure from an immediate financial standpoint, however, will be understood when it is known that the official reports from the several plants show them to be making current at 2 cents per kilowatt hour. The City Hall plant, under Chief Engineer Joseph W. Wood, paid for itself in 23 months, the value of the current being rated at the competitive price of 4 1-2 cents, besides which all additions and improvements to the plant were counted as expense and paid for as maintenance.



MAIN SWITCHBOARD, CITY HALL PLANT

In the City Hall plant, Mr. Wood says, the total expense of 3.07 cents included running the boilers for heating the buildings, which, before the plant for making light was installed, cost three times the present cost of light, or about two-thirds of the total present cost of operating the whole plant.

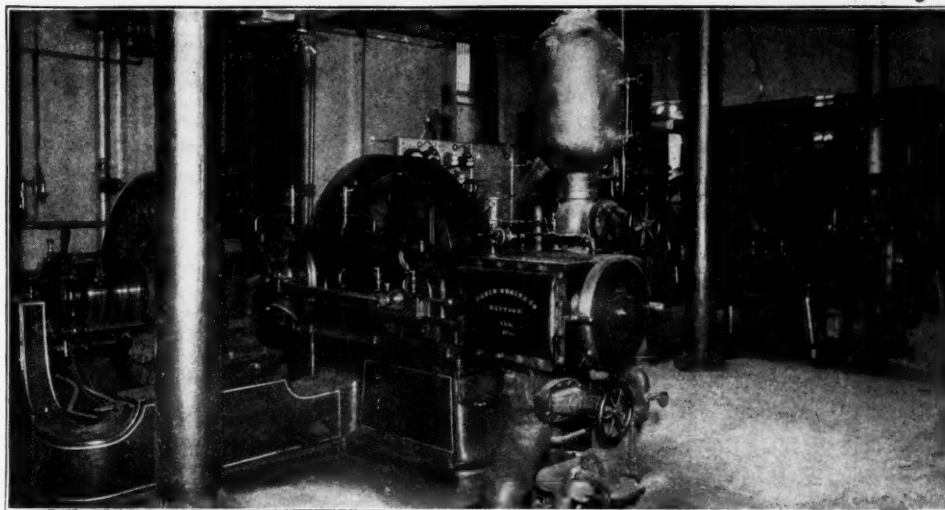
The following table, prepared by Mr. Wood, shows the entire cost of operating the plant for one year, including the expense of operating the heating system and the elevators in the several buildings. The total expense, including the heating plant and five per cent. each for interest and depreciation, as well as repairs and betterments, makes the total annual output of 801,132 kilowatt hours

Record for twelve months, ending October 31, 1907.	Total output of plant in kilowatts.	Value at contract price of 4 1/2 cents per kilowatt hour.	Total expense of operating plant, including heating plant in connection, and current for elevators.	Interest and depreciation, 5 per cent. each. Latter taken up in expense also.	The net earnings of the plant in one year, with ex- pense, interest and de- preciation taken out.
November.....	67,004	\$3,015.18	\$1,885.92	\$416.65	\$712.61
December.....	78,619	3,537.85	2,013.63	416.65	1,107.57
January.....	84,072	3,783.24	2,156.65	416.65	1,209.94
February.....	70,999	3,194.95	1,790.35	416.65	787.95
March.....	72,218	3,249.76	1,939.29	416.65	393.82
April.....	70,927	3,191.71	1,694.35	416.65	1,080.71
May.....	67,085	3,068.82	1,718.40	416.65	933.77
June.....	57,539	2,589.25	1,444.62	416.65	727.97
July.....	56,479	2,541.60	1,901.54	416.65	223.41
August.....	58,908	2,650.86	1,834.12	416.65	400.09
September.....	57,239	2,575.75	1,800.43	416.65	358.67
October.....	67,043	3,016.93	1,698.55	416.65	901.73
	808,132	\$36,415.90	\$21,877.86	\$5,000.00	\$9,538.24

cost but 3.07 cents per unit, or 1.43 cents less than the price at which the city is getting current under contract for other buildings at the competitive rate. The expense includes three shifts of men at good salaries.

The table shows a net earning, or in other words a net saving to the city, from the City Hall plant in one year, aggregating \$9,538.24, or more than one-fourth what the same amount of current would cost; not at the price the city would probably be paying for current had not the municipal plants been installed, but at the price created by the competition of municipal with private plants, or $4\frac{1}{2}$ cents per kilowatt hour. It is also unnecessary to charge the city five per cent. interest for the use of money which really belongs to the plant, the plant having, as it was stated, paid for itself two years ago, including additions and betterments. The city is therefore paying itself \$2,500 a year for interest on the plant and the same amount for depreciation and betterments, both of the latter already taken up in the expense account. In that way the real net earnings would be \$14,538.24, even after counting the heating plant as part of the lighting expense, as is included in the preceding table. The interest is also unnecessarily high, as the city has several million dollars on deposit in the banks at 3 per cent., and is only paying 3.65 per cent. on its improvement bonds.

The following table is similar to the preceding one, except that the current only is charged up to the expense. The cost of heating and ventilating (plenum system) in the City Hall has been figured at 65.5 per cent. and the hot water supply at 2 per cent. of the total cost of operating the plant, based on original cost of that work previous to the installation of the lighting plant, and taken from the two years preceding the installation of this plant. This leaves 32.5 per cent. of the total present expense for light and elevator current in the several big buildings. The cost of maintenance and depreciation is



ENGINE ROOM, CITY HALL PLANT

again taken up in the expense and the interest and 5 per cent. for depreciation is also counted in, thus allowing liberally for that item. The actual cost of current, according to the table, which is based on accurate detailed records, is 1.445 cents per kilowatt hour.

It will be seen from this table that, not including interest and the per cent. allowed for depreciation, which, as stated, is taken up in the expense, the city has made a net saving in one year of \$29,652, or nearly five-sixths of the value of the current used, were it purchased at the competitive contract price.

The expenses as figured in the above tables include the following: Lubricating oils, supplies, waste, packing, tools, repairs, maintenance, improvements and additions, coal, ash removal, all salaries, including engineers, firemen, dynamo tender, coal passers and extra help employed to replace employees absented by sickness or on vacation, and every other expense, barring water and rent, both of which would not raise the total expense to \$7,300 or decrease the net earning below \$29,000.

Lubricating oils of all kinds used are found to have cost 74 cents per 1,000 kilowatt hours per year. Waste and wipers, 1.1 cents per 1,000, and packing of all kinds, 18 cents per 1,000. A record of every item of expense is kept, recorded each day and totaled in the monthly reports. A book records the time at which the different shifts and engines change, and an automatic gauge records the actual steam pressure maintained for every minute of the day and night. A separate meter record is kept for each building supplied, and a few minutes' time only would be necessary to tell the exact cost of lighting any building on the circuit for any length of time. Some of the buildings lighted are a mile distant from the plant.

The City Hall plant consists of one 120-horsepower and three 185-horsepower engines, three 50-kilowatt alternating generators and three 50-kilowatt and one 75-kilowatt direct-current generators. Two direct-current motor generator balancing sets are maintained. The boiler capacity is 1,100 horsepower, divided into four 275-horsepower Heine safety water-tube boilers with Hawley downdraft furnaces.

Year ending October 31, 1907.	Total output in kilowatts.	Value at contract price of $4\frac{1}{2}$ cents per kilowatt hour.	Entire expense of generating current.	Net earnings at the same rate as contract.	Interest and depreciation, 5 per cent. each, not deducted from net earnings.	Net earnings with interest and depreciation also deducted.
November...	67,004	\$3,015.18	\$584.65	\$2,430.55	\$416.65	\$2,103.90
December....	78,619	3,537.85	624.22	2,913.63	416.65	2,496.98
January.....	84,072	3,783.24	668.56	3,114.68	416.65	2,698.03
February....	70,999	3,194.95	544.90	2,650.05	416.65	2,233.40
March.....	72,218	3,249.76	601.18	2,648.58	416.65	2,231.93
April.....	70,927	3,191.71	525.24	2,666.47	416.65	2,249.82
May.....	67,085	3,068.82	532.70	2,536.12	416.65	2,119.47
June.....	57,539	2,589.25	448.83	2,140.42	416.65	1,723.77
July.....	56,479	2,541.60	589.47	1,952.13	416.65	1,535.48
August.....	58,908	2,650.86	558.57	2,092.29	416.65	1,675.64
September...	57,239	2,575.75	558.13	2,017.62	416.65	1,600.97
October.....	67,043	3,016.93	526.55	2,490.38	416.85	2,073.53
	808,132	\$36,415.90	\$6,762.98	\$29,652.92	\$5,000.00	\$24,652.92

Burnt Ballast for Roadways

THE City Engineer of Glenwood, Iowa, J. L. Smith, describes, in a communication to us, a method of street improvement which he states is used with good results in that city. The distance between curbs is made 24 feet. Curbs from 6 to 12 inches high are set, and next to these are gutters 6 inches deep and from 2 feet to 6 feet wide, according to the amount of water to be carried. The remaining 20 to 12 feet is covered with burnt ballast about 6 inches deep. We do not suppose such construction would be advised for a locality where stone could be obtained readily; but the use of burnt ballast would probably be an improvement over a dirt road, and for a cheap surface in a small town would have its advantages. We would be glad to hear from any of our readers who have had experience with such construction.

Detroit Water Works Notes

THE report of the Board of Water Commissioners of Detroit, Mich., for the year ending June 30, 1907, shows that there was at that time 709.6 miles of water mains in the system, of which 57.4 were outside of the city limits. Almost one-half of the total is 6-inch pipe and 23 per cent. is 4-inch. Of pipes less than 4 inches in diameter there were 12.6 miles. There were in service 4,643 fire hydrants, 8,238 stop gates and 78,633 taps.

Of meters 6,844 were in use, or 8.7 per cent. of the number of services. One-half of the meters were $\frac{5}{8}$ -inch and about 19 per cent. were $\frac{3}{4}$ -inch, and other sizes up to 6-inch were in use. The most of these were Thomson meters, but seven other makes were represented. The value of the meters in service was estimated to be \$108,205, allowance being made for depreciation at 2 per cent. per year. During the year 498 meters had been installed. The superintendent says: "When they were first introduced here, ten years was supposed to be the life of a meter, but we find all that is required to make them last indefinitely is to repair the working parts or replace these with new when necessary. The outer casing being composed of bronze, age does not injure them." Many of the meters have been in use for over 16 years. The cost of meter repairs during the year was \$1,069.25 for superintendence and labor, \$760.31 for meter fittings and \$2.74 for express and freight charges; total, \$1,832.30.

The number of leaks per mile during the year was .127 and the cost of repairs per mile was \$8.52. The repair of leaks in mains, of which there were 90, cost \$2,852.07, of which \$570.45 was for material. Repairs to leaks in service connections, of which there were 532, cost \$1,563.73, of which \$11.91 was for material. Four thousand eight hundred and forty service cocks were inserted at a cost of \$2,707.21 for material and \$3,131.42 for labor and teams. The other of the larger items of expenditure for miscellaneous work were \$2,380.94 for setting 105 valves and sleeves; \$2,172.21 for examining, repairing and operating gates, \$108.54 being for new material, and \$3,502.68 for opening blow offs on dead ends, 7,891 being thus blown off. The total cost of all miscellaneous work was \$21,947.74.

The following table compares the plant and its operation with those of Cleveland and Milwaukee, which shows that the cost per consumer in Detroit was only about 70 per cent. of that at Milwaukee and 47 per cent. of that at Cleveland, although the per capita consumption is considerably greater than at either place:

	Cleveland	Milwaukee	Detroit
Population supplied.....	460,000	325,000	384,000
Cost of plant.....	\$13,836,000	\$5,545,000	\$8,173,000
Cost of plant per consumer.....	30.07	17.06	21.03
Bonds outstanding.....	4,266,000	326,500	966,000
Operation and maintenance per million gals., delivered (without bond interest)....	18.35	15.81	6.94
Operation and maintenance per million gals., delivered (with bond interest).....	25.77	17.15	9.04
Operation and maintenance (exclusive of interest), annual cost per consumer....	0.88	0.60	0.41
Daily number of gallons per capita.....	131	91	160
Total water rates collected.....	807,070	446,697	501,351
Total water rates collected per consumer.....	1.75	1.37	1.31

The department also prides itself on the excellent typhoid showing, the death rate per 100,000 in Detroit having been 12.2; Cleveland, 15.1; New York, 16.2; Chicago, 16.6; St. Louis, 18.7; San Francisco, 19.1; Boston, 19.7; Milwaukee, 20.3; Buffalo, 22.5; New Orleans, 31.1; Baltimore, 35.8; Cincinnati, 40; Kansas City, 42.6; Washington, 45.4; Philadelphia, 47.6; Grand Rapids, 50; Pittsburg, 101.6; Allegheny, 128.6; Indianapolis, 194.3. These figures were for the year 1905 and were tabulated by the Superintendent of Water Department at Cleveland. It is seen that the typhoid death rate at Allegheny is more than ten times that at Detroit, and that at Indianapolis about 16 times as great.

Brick Paving Pennsylvania Roads

At a recent good roads convention in Lawrence County, Pa., it was decided, according to press reports, to make efforts at the next session of the Legislature to so amend the State highway laws that State aid may be given for constructing brick as well as macadam highways. Butler County citizens also strongly favor such a law, the secretary of the Committee on Agriculture, who is from that county, having urgently advocated this change at the last session of the Legislature. The chief reason given for the preference of brick is that macadam requires considerable expenditure for maintenance almost from the first, while brick can be used for several years without such expenditure, and costs but little more to construct.

Septic Tank Patent Decision

THE decision of the Circuit Court of Appeals, abstracted in our January 29 number, is to be appealed to the Supreme Court—the last resort—by Saratoga and the co-defenders of the suit brought against that city. Other cities are preparing to enlist in the fight, one of these, Columbus, O., having appropriated \$350 for this purpose.

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FEBRUARY 19, 1908.

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Progressiveness in Small Cities

THE annual report for 1906 of the Bureau of Sewers of Brooklyn, N. Y., states that "A new standard plan of manholes has been prepared and adopted. The inverts of the manholes on pipe sewers will consist hereafter of split pipe instead of brick. This will permit greater uniformity of flow." The writer has used no other construction than this for twenty years past, and believes that a majority of sewerage engineers could say the same. Another illustration: A gentleman connected with the New York water works department stated two or three years ago that there were in that city very few house services provided with curb cocks, or their equivalent; but that, to shut off a consumer, the corporation cock must be reached by excavation.

We could mention a number of other details in which many of our large cities are years behind the most ap-

proved modern practice. The reason probably lies in the red tape necessary in large departments, and the tendency to adopt standard designs for details, which are simply embodied without further thought in all future plans. The chief of a department seldom bothers with details, and the younger subordinates who are brought into contact with them accept precedent and the approval signature of their chief as superior to their own inexperienced judgment—or are informed they should accept them as such.

On the other hand, the engineer of a small city generally personally oversees much of the work under his charge; he is not so tied down to routine by the overwhelming mass of work passing through his hands that he can not study out details; and—shall it be said?—he is not so provincial as his metropolitan betters, but is willing and anxious to learn of other engineers, and no town is so small or so far away that he will not eagerly recognize and adopt any good ideas it has to offer.

We believe that most of our good ideas in every municipal field originate and are tried out in the small city, and years after, when they have become commonplace, the large city adopts them. We do not, of course, refer to those large things which only great cities can do, but to the details of practice. We would suggest that the heads of public works departments of our large cities take the time, say once a year, to visit with humble mind the smaller cities in their neighborhood and inform themselves of the latest methods and designs in their departments. They may be surprised to learn that New York has more oil street lamps and horse cars, and Chicago more old style cedar block pavements, than almost all the other cities of the country combined, and Boston more fires per capita than almost any other city. Also the engineers of the smaller cities may take new heart and encouragement in the realization of how much more important their work is to their fellow engineers than that of those in the largest cities.

Ridgewood Sewage Disposal Plant

RIDGEWOOD, N. J., a suburb of New York, of about five thousand population, disposes of its sewage by the use of septic tanks and contact filters. The tanks are not covered, except by abundant scum. There are four contact filters, two 58 feet by 120 feet and two 60 feet by 120 feet. The filters are of concrete, filled with about eighteen inches of coke covered with three or four inches of crushed stone. Horseshoe tile drains connect with a main central drain for removing the effluent. Automatic air controllers are used to secure rotation in dosing the beds. From three to nine hours are required for filling, and the discharge takes place in thirty to sixty minutes.

Distributers, which extend diagonally across the bed, are constructed with reinforced concrete bottoms, in which are fastened vertical flat iron pins, against the insides of which are bolted the side boards. The concrete bottoms are made in sections twenty feet long. The distributers are contracted in width at 30-foot intervals, at which points are placed inwardly swinging gates to regulate the discharge there onto the surface of the bed.

NEWS OF THE MUNICIPALITIES

Divers Subjects of General Interest and Their Treatment by City Councils and Officials—Streets, Water Works, Lighting and Sanitary Matters—Police and Fire Items—Government and Finance

ROADS AND PAVEMENTS

An Experimental Pavement

Dallas, Tex.—An experiment in street paving is being carried on along Griffin street, where the General Supply and Construction Company has the contract. The asphalt product of The Texas Company is used and the pavement is to be eight inches thick, composed entirely of asphalt. It is claimed that the street will be ready for traffic inside of thirty minutes after it is completed. If this class of work is successful, the cost of street building in Dallas will be greatly reduced. A novelty in brick paving, for this city, is the expansion joint of asphalt put in every twenty-five feet in a pavement, the joints of which are elsewhere grouted with cement.

Wants Posterity to Pay Its Obligations

Lexington, Ky.—Mayor Skain has outlined a plan for reconstructing the streets of Lexington. He recommends a bi-partisan Street Commission, the issue of \$250,000 in bonds to run for forty years, and the creation of a sinking fund for the payment of the bonds at maturity. The addition of this amount to the bonded debt of the city would make the total a fraction over five per cent. of the property valuation, only half the debt which the law allows the city to assume.

Grade Crossing Eliminated

Pittsburg, Pa.—Within the last six years the Pennsylvania Railroad has removed 727 grade crossings, most of which have been within the limits of the larger cities, the idea being to get rid of the most dangerous grade crossings. West of Pittsburg 105 crossings were on the Northwest system and 54 on the Southwest, the balance, 568, being on the Eastern lines.

Figuring on Its First Pavement

Port Jervis, N. Y.—Mayor Swartwout has asked the Common Council for a street appropriation of \$5,000 to be raised by general taxation and has set City Engineer Irving Righter to figuring how much paving can be done with it. Front and Pike streets, which it is proposed to pave, are occupied by the lines of trolley companies which would have to pave nine feet in width. With the property owners share of one-third each, it is estimated that \$18,000 worth of work could be done. Brick at about \$2.25 a yard is the material which it is proposed to use.

Assessment System of Street Paving Wanted

Wheeling, W. Va.—The establishment, through legislation, of the Ohio system of street paving by which one-third of the cost is charged to property owners on each side of the street and one-third to the city is being advocated by Councilman Elliott and others. Many people in Wheeling have paid more in the general paving tax than the cost of paving in front of their own property, and still their streets are unpaved. There are now sixty miles of paving in the city, of which not more than two miles are in good order, so that in the near future a large amount of reconstruction will be necessary. It is desired to have the new system put in effect before any section of the city is repaved under the levy fund, as in that instance some property owners would be given an unfair advantage over others.

SEWERAGE AND SANITATION

May Issue Health Bulletins

Augusta, Ga.—Members of the Board of Health are considering the advisability of publishing a monthly Board of Health bulletin, containing mortality rates, contagious diseases, reports of Meat and Milk Inspectors, Plumbing Inspectors and other officers, along with any other facts or figures that should properly be made public.

All Street Departments Under Single Head

Boston, Mass.—A consolidation of the Street, Street Cleaning and Watering, Bridge, Sanitary, Lamp and Sewer Departments under a single head has been recommended by the Finance Commission. This advice follows soon after a detailed report on the Sewer Department, which stated that the Department was in an utterly demoralized condition. The report further stated that the cost of sewer work now contemplated is estimated at nearly \$20,000,000 and that so far as the Commission learned this expense has been undertaken without any systematic study of the vital problem and that it is not impossible that the expense might be \$30,000,000.

Error in Specifications Does Not Invalidate Contract

Cincinnati, O.—An opinion has been given to the Board of Public Service by City Solicitor Ballard holding that the sewer contract of T. P. Strack (referred to in our issue of February 5, page 161) is valid. As Strack went to the City Engineer to obtain all possible information, the opinion given is that the city and not the contractor is responsible for the error in the specifications. Mr. Ballard advises the city to let Strack complete the sewer.

Sewer System Completed

Elgin, Ill.—The storm water sewer system has been completed at a cost of \$145,300. It comprises 1,897 feet of 36-inch concrete sewer, costing \$6.81 per foot; 2,297 feet of 33-inch concrete sewer, costing \$4.60 per foot; 1,108 feet of 24-inch pipe, costing \$2.39; 3,037 feet of 18-inch pipe, costing \$1.82; 4,390 feet of 15-inch pipe, costing \$1.41; 5,813 feet of 12-inch pipe, costing \$1.05; 10,534 feet of 10-inch at 79 cents and 111,379 feet of 8-inch at 68 cents. The system also contains 525 manholes, averaging \$24.80 each.

Sanitary League to Be Organized

Michigan City, Ind.—Dr. W. A. Evans, one of the city health officers of Chicago, and Dr. Sauer, of the Health Department of Whiting, recently attended a meeting of the Michigan City Health Board, city officials and physicians for the purpose of forming a Health League with a view to fighting typhoid fever and unsanitary conditions generally in the district in Indiana and Illinois around the south end of Lake Michigan. A mass meeting will soon be called, at which representatives of the Health Boards of both States will be present, as well as each of the cities and towns in the district. To purify the harbor and Trail Creek a disposal system for Michigan City will be advocated.

Surface Water in Sanitary Sewers.

New Castle, Pa.—Data have been presented to the Sewer Committee of Councils, showing that the city pours into the rivers nearly 75 per cent. more water each day than is pumped into the reservoir each day by the local water com-

pany. With a view to remedying this condition, the Commissioner of Health has been allowed the sum of \$3,000 for alterations and repairs—to see that all surface and roof water is shut out of the sanitary sewers. Inasmuch as Council has already taken action to secure land for the location of a sewage disposal plant, it is important to cut down the volume of sewage as much as possible.

Contractor Offers to Finance and Build Sewers

San Francisco, Cal.—A responsible contractor has offered to do seven or eight million dollars' worth of paving and sewer building for the city at cost plus fifteen per cent. and take in payment three and one-half per cent. city bonds already authorized, but unsalable at present. Although the fifteen per cent. profit would not more than make good the difference in value between a three and one-half and five per cent. bond, thus making the offer a desirable one, there are doubts about the city's legal authority to enter into such a contract.

Typhoid Epidemic at Peekskill

Peekskill, N. Y.—A typhoid epidemic is raging in Peekskill. Seventy cases have developed so far, twenty-five in the last few days. The State Board of Health officials are making inspections of the water shed in the town of Cortland. Men employed on the New York aqueduct work are living along the streams and a patrol will be established to keep the camps in sanitary condition. Orders have been issued to boil all drinking water and to use steaming water in washing dishes and cleaning tables and floors.

Chemical Disposal Works

White Plains, N. Y.—Trustees of the town of Scarsdale have applied for an injunction restraining the White Plains village Trustees from emptying the outflow of its disposal plant into the Bronx River. The Scarsdale people complain of the noxious Bronx River stench that menaces their health. They claim that the chemical treatment at the White Plains plant is not effective. Henry Dyckman, counsel for White Plains, admits that the increasing population has overburdened the disposal plant, but claims that the granting of an injunction would only make matters worse.

WATER SUPPLY

Would Charge for Use of Hydraulics

Corning, N. Y.—The Board of Water Commissioners, in its first annual report to the Common Council, has recommended that the city at large be charged a rental of \$20 per fire hydrant per annum. This would amount to \$5,200 a year. The Board contends that persons who do not take city water should not be afforded the use of water for fire protection without any charge. Some of the members of Council object to the charge on the ground that it would have to be met by taxes, which are already high enough. The Commissioners also suggest a counter-charge on the part of the city for the use of offices and a shop.

Wants to Acquire Distributing System.

Paterson, N. J.—As a result of the first meeting of the Special Committee on Municipal Water Supply, Mayor McBride has sent a communication to the Passaic Water Company asking that a selling price be set for the distributing system which is now in operation and inviting the officers of the company to attend a conference with the municipal committee. It did not seem necessary to the committee to take up the question of supply at once, because water could be purchased from the East Jersey Water Company or some other corporation at any time. In the meanwhile the plans of the State authorities for a reservoir to store the waters of the Passaic will have assumed more definite shape and water might be obtained from the State Commission at a better rate.

Controversy Over a Water Works Franchise

Elkhart, Ind.—Last November the Board of Public Works advertised for proposals for a new water franchise. Two bids were submitted, one by the Elkhart Water Company, which now holds a franchise that will expire in about a year, the other by Clark and Trainer, of Chicago, Ill. After weeks of controversy and wrangling, both bids were rejected. During the interval between the opening and rejection of the proposals, the Board held a number of meetings, to which the public were invited, and on many occasions attorneys, experts, interested promoters, hired partisans and others addressed the meeting, much after the manner of a political gathering. The result was that much irrelevant matter was introduced to win popular approval and the issue was confused. However, with the assistance of a water works engineer careful specifications were drawn up and bids have been again invited.

Would Buy Water Companies

San Francisco, Cal.—To combine the water companies on both sides of San Francisco Bay into a municipally-owned corporation, with distribution systems extending to all the bay cities, was a project considered at a conference of city officials at Mayor Taylor's office. The two largest companies are the Spring Valley and the Peoples' Water Company. The combined resources of these companies and some smaller ones are estimated as sufficient to supply the metropolitan area for a number of years. Later a large supply could be obtained from the Hetch Hetchy Valley, in the Sierras, and distributed through the pipes already acquired.

Quality of Water Improved

Troy, N. Y.—So much complaint has been made about the quality of the city water that samples were submitted to James M. Caird for analysis and report. The number of bacteria was excessive, 5,288 and 2,420 per cubic centimeter, the second sample having bacillus coli communis present. Algae were also found, which accounts for the objectionable color and taste. Nevertheless, the typhoid mortality rates indicate that since water was taken from Tomhannock Lake in May, 1905, there has been a great improvement in sanitary conditions. The typhoid death rate per 100,000 in 1900-1907 is as follows: 119, 56, 53, 30, 31, 51, 35, 26.

Manufacturers Favor Greater Water Supply

Youngstown, O.—Some of the city officials who have advocated the greater water supply plans see in the recent proposition of the Mahoning Water Company to furnish the city with water from the Yellow Creek Reservoir a well-laid scheme to thwart the efforts of the supporters of the Berlin basin project. At any rate, the water company's proposition received scant consideration at a meeting of manufacturers and others having large interests in the city with the Special Water Committee of Council. It was the almost unanimous opinion that the future prosperity of the city as a site for great manufacturing establishments depended upon an abundant supply of good water, such as would be afforded by the Berlin scheme. It may be necessary, however, to purchase water from the company for three years, until the Berlin reservoir is built.

STREET LIGHTING AND ELECTRIC POWER

Inspection of Electric Meters

Washington, D. C.—Congressman Jenkins has introduced a bill in the House of Representatives which, if passed, will place the price of electric current furnished to consumers in the District of Columbia at 7 cents per kilowatt hour. An Inspector of Electric Meters is to be appointed, under the act, at an annual salary of \$2,000, to be paid by the electric lighting companies. He is to be appointed by the President, and his appointment must be approved by the Senate. The Inspector shall make an annual report to the Commissioners.

Ohio Electric Light Decision

Columbus, O.—Until the Legislature passes an enabling act, steps toward which have already been taken, it will be impossible for municipal lighting plants to sell current for commercial purposes. This is in accordance with a judgment rendered by the Supreme Court in the case of Jackson vs. The City of Nelsonville. The City of Nelsonville is enjoined from furnishing current to private parties because, at the time the municipal plant was enlarged, there was no authority under the municipal code by which a city could engage in furnishing current for commercial purposes.

Agreement Over Rates Seems in Sight

Fort Wayne, Ind.—In order to avoid the expense and delay liable to grow out of the lawsuits pending between the city and the gas company, a conference of the representatives and attorneys of both parties was recently held. The gas company offered to make improvements and extensions in its plant and distributing system to the value of \$200,000, with the understanding that it charge ninety cents for gas for the first five years and eighty-five cents for the five years subsequent, the rate for the period following to be agreed upon by arbitration. The proposition seemed reasonable to the city's representatives, but will have to be indorsed by Council.

Franchise Bill Infringing on Local Rights

Hagerstown, Md.—At a special meeting of Council, Mayor Mish stated that a bill would probably be presented to the present Legislature giving to a corporation power to lay conduit pipes and manufacture and sell gas and also to furnish natural gas to municipalities. Under the proposed bill the corporation is given the right to enter any town and lay gas mains. The Mayor, while desirous of having natural gas, believes the corporation should be required to secure a franchise from the city so that reasonable regulations, including maximum rates, could be established. The right to condemn property, which the bill proposes to give the corporation, was objected to by City Attorney Neill, who said that under the clause the corporation might even condemn the Market House.

Wisconsin Method of Adjusting Lighting Rates

Madison, Wis.—An important step has been taken in the proceedings before the Public Utilities Commission, looking to a reduction in the price of gas and electricity, provided such reduction is justifiable. An estimate made by Professor Pence of the physical value of the Madison Gas and Electric Company has been filed. The figures represent what it would cost to build a new plant equally as good as that now in existence; also the actual value of the present plant. The total cost to replace gas and electric plants is given as \$846,507 and the actual value of the present plant as \$693,964. The Commission will still have to estimate the "going value" of the plant, i. e., the value of the plant arising from the fact that it has an established business. Whether or not an allowance will be made for franchise value is not known.

Will Investigate Municipal Lighting Business

Tacoma, Wash.—After having been besieged for more than a month by angry constituents, who are patrons of the city lighting department, the members of the City Council voted for a resolution introduced by Councilman Hawthorne instructing the Commissioner of Public Works to hire an electrical expert to thoroughly investigate the city's lighting system. Some of the consumers have paid bills five times as large as were presented at corresponding dates last year. Some of the differences are accounted for by a change in the date of reading, so that the bills covered a period of more than thirty days. The fact that meter readings have not been given in the bills is also the cause of a good deal of dissatisfaction.

FIRE AND POLICE

Three-Platoon System for Police of New York Cities

Albany, N. Y.—A bill has been introduced in the Legislature to reorganize the Police Departments in cities of the first and second classes so as to introduce the three-platoon system, with its limitation of duty to one trick of eight hours out of twenty-four. Buffalo is the only city that will not be affected by the bill, as it has the system already. It is the efficiency of the Buffalo police that convinced Senator Davis of the merits of the plan. Detective Sergeants are excepted. According to the bill, no platoon or member thereof shall be assigned to more than one tour of duty in 24 hours and no tour shall be longer than eight hours. No policeman shall be kept on reserve duty more than eight hours in 72. The tours of duty of each platoon must be changed at least once a month, this being intended to prevent policemen from forming too intimate acquaintances on their beats. The bill also provides that policemen on reserve duty shall not be called upon except in cases of emergency and shall be allowed to sleep through their trick of duty, subject only to emergency call.

Vacation for Altoona Firemen

Altoona, Pa.—Mayor S. H. Walker has approved the ordinance providing for a week's vacation annually for the employees of the paid Fire Department who have served two years in the Department.

Panama Has Added Fire Apparatus

Colon, Panama.—To prevent a repetition of recent conflagrations on the Isthmus of Panama a new system of fire alarms is being installed at Ancon, Culebra, Empire and Gorgona, where 50 boxes have been placed. Five new hose wagons and 13 horses have been added to the Zone Fire Department.

Will Shake Up Fire Force

Milwaukee, Wis.—Charges alleging misconduct and incompetency at a recent fire may bring about many changes in leading positions in the Fire Department. The moving spirit in the charges is Thomas Clancy, Chief of the Department, and one of the powers in the Milwaukee Board of Fire Underwriters. There is very apt to be a clash between members of the Fire and Police Commission, the Chief and the Board of Underwriters over the changes in the Department.

Favor Part-Pay Fire Department System

Perth Amboy, N. J.—Mayor Bollschweiler and an Aldermanic Committee who have made a tour of inspection of neighboring Fire Departments, with a view to improving the local organization, have reported in favor of the plan adopted in Elizabeth, N. J., in 1902, which has worked well ever since. The Department is commanded by a Chief, with a Captain in charge of each company. Each company has five men who are on duty all the time and six call men, who are ready to respond when needed. The Committee thinks that three full-time men and two call men would answer the purpose in Perth Amboy.

Flat Car for Fire Apparatus

Utica, N. Y.—General Manager Allen, of the Utica and Mohawk Valley Traction Company, has submitted to representatives of sixteen villages an estimate of the cost of a car for transporting fire apparatus, to the effect that the cost of a car alone is \$8,000 and that \$4,500 would be required for shed for storage and track connections and incidentals. The railroad company would make no charge except for the services of the train crew. Mayor Kissinger, of Rome, Chairman of the Committee of the Associated Towns, will call a meeting to complete arrangements.

GOVERNMENT AND FINANCE**Increasing Difficulty of Providing Ways and Means**

Bridgeport, Conn.—City Auditor Bernard Keating, in his annual report, states that the task of providing means for operating the city government becomes greater every year. The sums asked for by the various departments are far in excess of the amounts it is possible to grant, as a compliance with the requests would necessitate a tax rate of 23 mills on the dollar. Even with reductions amounting to \$500,000, he finds it difficult to keep the tax rate at a satisfactory figure. This is due partly to the increases in fixed expenses during the past year in the Educational, Fire and Police Departments, where there have been increases in force and salaries. A tax rate of 15.5 mills is recommended.

Improved System of Accounts Proposed

Burlington, Vt.—The expert accountants, How Rose & Co., of New York City, have completed their audit of the books and accounts of the City Departments. They state that with the exception of a few clerical errors the books have been methodically and neatly kept. The system, however, is antiquated and requires improvements in order that actual results can be more readily reached. The books of the Water Department were found to be in excellent shape, but cumbersome. The books of the Electric Light Department do not show the result of operations in a concise form. The books of the Street Department were not up to the standard of the other Departments, and the drawing of lump sums from the Treasurer instead of exact amounts required was condemned. Improved forms and system of bookkeeping will be submitted.

Debts Illegally Contracted

Dayton, O.—In an exhaustive report, fortified with facts and figures, the Finance Committee of Council has returned its recommendations and findings on the condition of the funds in the Board of Public Service to Council. It was stated that the members of the former Board contracted bills against the city when there were no funds in the treasury with which to pay them. The report substantially advises the repudiation of all claims for sums contracted for when there were no funds to meet them. The amount of these bills is about \$25,000. The report takes the ground that the members of the old Board are personally responsible.

Duplication in Printed Documents

New Bedford, Mass.—In order to avoid duplication in the various department reports which are printed in the city documents, Mayor Bullock will have all copy submitted carefully edited. Last year 21 pages describing the location of city fire hydrants were printed in reports of two departments, and a number of minor duplications occurred.

Responsibility for Injuries on Defective Streets

Norfolk, Va.—Following the defeat of a bill before the General Assembly designed to exempt the city from all liability for damages or injury from defective sidewalks or streets, a new bill has been introduced which requires the city to protect its people from injury from unguarded repair or construction work, but will exempt it from damages arising from other defects in the streets. This would place cities in the same position as county governments in such matters.

Valuation of Greater Pittsburg

Pittsburg, Pa.—The Assessor's report shows the total valuation of Pittsburg as \$704,271. Of this amount the total taxable valuation in the old city is \$503,704 and in the North Side \$95,927, the balance representing personal tax.

Adopts Initiative and Referendum

Seattle, Wash.—Amendments to the city charter providing for direct legislation through the initiative and referendum and the submission of all public service franchises to a vote of the people have been adopted by the City Council. These propositions will be voted on March 3.

REFUSE COLLECTION AND DISPOSAL**Baltimore's Garbage Reduction Plant**

Baltimore, Md.—The garbage reduction plant to be built and operated by the Southern Product Company will be located on Humphries Creek, a little more than five miles from the city. The company, which has secured the contract for removing and disposing of the city's garbage, is now dismantling the plant in South Baltimore operated by the Baltimore Sanitary Contracting Company, and will remove it to Humphries Creek. The city has recently closed its contract with this company by giving notes for the balance of the purchase price of \$372,888. Under the terms of the ordinance the company is to give the city a bill of sale on the new reduction plant, to be availed of in case the company fails or goes out of business before the expiration of the ten years' life of the contract.

Will Give a Crematory Conditionally

Augusta, Ga.—An offer has been made to the City Council by the Revolving Crematory Company to erect and maintain a crematory for the use of the city under certain conditions, viz.: That the city shall furnish the site for the plant, shall furnish 25 horsepower for operating it, and requires the people of the city to use a powder which the company sells.

Contract System for Street Cleaning

Jersey City, N. J.—Tired of the action of the employees of the Street Cleaning Department in going on a strike recently when they were placed on half time, owing to a reduced appropriation for the fiscal year, Mayor H. Otto Wittpenn declares that in order to get rid of the annoyance of continual strikes following unreasonable demands, he will send a message to the Street and Water Board advising the abolishing of the municipal plant and the reestablishment of the contract system. Street cleaners are paid 30 cents an hour and the Department has been an asylum for political workers.

Must Separate Garbage and Ashes

Louisville, Ky.—The Board of Public Works is desirous of having an ordinance passed requiring the separation of garbage and ashes. Under the administration of Mayor Weaver a garbage crematory was built by the Dixon Crematory Company, of Toledo, O., at a cost of \$35,000. It has never been used because it could not consume mixed refuse.

Artistic Garbage Wagons

Sacramento, Cal.—The new garbage ordinance, providing for collection by the city in its own wagons, contains a clause inserted at the request of Dr. J. H. Parkinson that the wagons be painted some pretty color, making them ornamental as well as useful, and suitable for floral parades as well as their daily routine. The ordinance allows private collectors who keep stock and chickens to continue to gather refuse, especially from hotels and restaurants. Collections will be made by the city force twice a week in winter and three times a week in summer.

Living Wages for Street Cleaners

Troy, N. Y.—Assemblyman Filley's bill to incorporate into one act several acts amending the city charter of Troy has been passed. Among other things this act empowers the city to pay the sweepers at a day rate. This means an opportunity to pay them a living salary. At present they are paid \$28 a month, and the object of the bill is to give the Commissioner of Public Works authority to fix their wages.

City to Clean Streets

Utica, N. Y.—The street cleaning contract will expire in May, and then the Board of Public Works expects to have the work performed as it did before the letting of the contract, under the direction of the City Engineer, the Board hiring its own laborers. All the members of the Board have been dissatisfied with the present contract system, and the estimate presented this year for the work is for the same amount which has been paid to the contractors.

PARKS AND CITY BEAUTY

Tag Day to Aid Playgrounds

Dallas, Tex.—Mayor S. J. Hay, in response to a request from the clubwomen of Dallas, has issued a proclamation designating February 29 as "Tag Day." The purpose is to collect funds for the establishment of a playground for the children of Dallas. Clubwomen and others in sympathy with the movement will be provided with little tags marked "I am tagged to help the children of Dallas." These will be pinned to the coats of the contributors, who will not be asked for any definite sum. Possession of a tag will give immunity from further requests for subscriptions.

Free Music for Parks

Minneapolis, Minn.—Free music for Minneapolis parks during the coming summer months has been unanimously decided on by the Board of Park Commissioners. The total estimated expenses of the Department for the coming year are \$240,641.

Park at Fort George

New York, N. Y.—A movement has been started by the Municipal Art Society to have the city acquire for park purposes the western slope of the ridge on which stands Fort George, with adjacent land, and to acquire an area bounded approximately by the Ship Canal, Kingsbridge Road, Broadway, Seaman avenue and Isham street. Both of these tracts are rocky, wooded heights, practically useless for building purposes. Landscape Architect Harold A. Caparn, who has made a report to the Society regarding the possibilities of these areas, advises that the city acquire land in addition to that needed for public use and sell it again after the improvements are made so as to recoup itself for the expense.

Philadelphia to Establish Playgrounds

Philadelphia, Pa.—The Philadelphia Playgrounds Association is making an effort to lead Philadelphia up to the level of other large cities in providing places of amusement for the children. It is not proposed to ask Councils for funds, but the city will be requested to turn over suitable locations from time to time and the Association will put them in shape.

Columbus Memorial at Washington

Washington, D. C.—The proposed memorial to Christopher Columbus, for which Congress has appropriated \$100,000, will be erected on the plaza in front of the Union Station. The location was approved by the District Commissioners after a consultation with Architect Burnham. The memorial, which will probably take the form of a monumental arch, will conform with the general architecture of the new station.

RAPID TRANSIT

Trolleys Taxed for Increasing Fares

Emaus, Pa.—By a unanimous vote the Borough Council passed on third reading an ordinance placing a license fee of \$25 on each regular trolley car operating in the town and a license tax of ten cents on each electric light, trolley or telephone pole in the borough. The passage of this ordinance was the consequence of an increase in fare from Allentown to Emaus from five to ten cents by the Lehigh Valley Transit Company several months ago.

Universal Transfers

Washington, D. C.—The universal transfer amendment now pending in the District Committee of the House of Representatives provides that to all passengers shall be given free, reciprocal, continuous, universal transfers, interchangeable to, from and over, the line or lines of every street railway company or companies in the District, good and receivable at all junction points, intersections or connections of every street railway company, for one continuous passage, in one general direction, for one cash fare of five cents.

To Enforce Terms of a Franchise

Yonkers, N. Y.—Corporation Counsel Otis has been ordered by Council to take such action as may be necessary to compel the receiver of the Yonkers Railroad Company to live up to the terms of a franchise granted some time ago for operating cars on Broadway. The most important terms of the franchise were an eight-cent fare over the several lines in connection with the New York Elevated and Subway lines, the use of the safety or air brakes on all cars, and the issue of universal transfers in Yonkers. The railroad built the road, but so far has refused to operate it under the conditions agreed upon.

Elevated Freight Railroad

New York, N. Y.—An elevated freight railroad over Eleventh avenue is the means proposed by the Public Service Commission in a report to the Legislature for getting rid of the New York Central railroad tracks on that avenue. This is the third time this plan has been proposed. Hitherto the cry "West Street Grab" has killed it. The present plan, however, is to build the line between West street and the piers. Branches to the piers and to every freight yard depot and factory on the West Side are proposed. The Commission recommends the building of the line by the city, or construction by a private corporation, the city reserving the right to purchase in 25 years.

MISCELLANEOUS

Quantitative Determination of Soot

Cincinnati, O.—A number of tests have been made by Dr. H. Shipley Fry to determine the quantity of soot which settles in the city in a given time. He placed buckets of water on buildings in a number of places and examined the contents at the end of a month. The heaviest accumulation recorded was at Sixth and Vine streets, where the amount averaged 2,387 pounds to a block, or 172 tons to the square mile a month. The flat downtown district of 3.15 square miles gathered soot at the rate of 541 tons a month.

Five Public Baths for Kansas City

Kansas City, Mo.—The first of the five public baths to be built in this city is to be in the district north of Admiral boulevard, between Main street and Troost avenue. That was the decision of the Board of Public Works, and a recommendation to that effect will be made to the City Council.

Stops Drinking on Streets

North Augusta, S. C.—Council has found it necessary to pass an ordinance prohibiting the drinking of intoxicating liquors on the streets. The State of South Carolina maintains a dispensary on a main street within easy walking distance of Augusta, Ga. The regulations of the establishment provide that no customer shall drink inside the place. As a result, a large percentage of the imbibing is done on the sidewalk in front of the dispensary.

Saving on Garbage Disposal

St. Louis, Mo.—Bids were recently received for the disposal of city garbage which will effect a very considerable saving over the former cost. Last year the city disposed of 46,144 tons at a cost of \$72,383, exclusive of collection. The Sanitary Reduction and Chemical Company, recently organized by W. F. Miller, President of the Pittsburg Sanitary Reduction and Incineration Company, put in a bid of 27 cents a ton, which will effect a saving of about \$60,000 a year. The successful bidder must file his plans for the plant, which must be approved before the contract is awarded. Mr. Miller intends to build a plant similar to that in Pittsburg, costing about \$250,000. After the contract is approved the contractor must purchase five acres of land near the river or on a railroad at a point not over twenty miles and more than one mile from the city limits. The city will continue to collect garbage as hitherto, at a cost of about \$185,000 a year.

LEGAL NEWS

A Summary and Notes of Recent Decisions—Rulings of Municipal Interest

BUILDING REGULATIONS—EVASION

Tenement House Department of City of New York vs. Newland Realty and Construction Co.—An owner of tenement houses filed with the Tenement House Department plans for altering them for manufacturing purposes. Under these plans he proceeded to tear down partitions, erect others and make extensive alterations, which having been completed, the owner filed a second set of plans, which contemplated the adaption of the houses as they then were to tenement house purposes, and the plans were approved. Held, in an action for the penalty for a violation of the tenement house law, after notice of violation, in that the alterations were made without plans filed and approved as required by law, that, it appearing that the alterations made before the second set of plans was approved were such as could not have been legally made in existing tenement houses, and the facts warranting a finding that the alterations so effected under the plans first filed were made with the intent to evade the tenement house law, and that the owner never intended to turn the houses from tenement to non-tenement purposes, he was guilty of a violation of the law.—Supreme Court, Appellate Term.

STOCKYARD LAWFUL IF NOT NUISANCE

Mayor and Council of Hagerstown et al. vs. Baltimore & O. R. Co.—Under the authority granted a municipal corporation to pass ordinances necessary for its good government, to prevent nuisances and to regulate and control offensive trades, an ordinance making unlawful a stockyard, though conducted in such a manner that it is not a nuisance, is invalid. An ordinance making unlawful the keeping of domestic animals in a town in a certain manner, without a permit from the Mayor and Council, is invalid, as capable of being administered partially or unreasonably.—Court of Appeals of Maryland.

ASSESSMENT OF TAXES—ERROR—RECOVERY

City of Eugene vs. Lane County.—Where, under a city charter, taxes on property within the city, for road purposes within the city, should have been levied by the city, but the same were levied by the county, and the county collected them, and the taxes were voluntarily paid, the city was entitled to recover them from the county. Where a void tax is voluntarily paid, it cannot be recovered back.—Supreme Court of Oregon.

ORDERS ON TREASURER—MAYOR'S DISCRETION

Rudolph et al. vs. Hutchinson, Mayor.—The Janesville City Charter declares that all orders drawn on the Treasurer must be signed by the Mayor or the presiding officer of the Council and countersigned by the Clerk, except as provided in section 2 of chapter 3, which, with reference to ordinances, declares that, if the Mayor approves, he shall sign and return to the Clerk, otherwise return with his objections to the Common Council, who may reconsider and pass over his veto, and then provides that the Mayor may withhold his signature from any orders to be drawn on the City Treasurer, but that the Council by two-thirds vote of its members may direct the Mayor to sign such order. Held that the Mayor's duty to sign orders on the Treasurer is discretionary and cannot be controlled by mandamus.—Supreme Court of Wisconsin.

TOWN PROPERTY—PRIVATE USE

Lakeside Lumber Co. vs. Jacobs.—Under Statute 1898, authorizing the electors to confer power on a town to purchase and hold for the use of the town any estate, real or personal, and to sell and convey the same, a town has no power to authorize a private corporation for its private interest to lay a steam pipe across a lot which the town holds for the maintenance of its water and light plant.—Supreme Court of Wisconsin.

MUNICIPAL CORPORATIONS—RIGHT OF APPEAL

Town of Brighton vs. Miles.—Code 1896 gives a right of appeal from judgments on prosecutions for violating ordinances to the defendant alone, and a municipality has no right of appeal, unless given by its charter.—Supreme Court of Alabama.

CITY AND WATER COMPANY OBLIGATIONS

Omaha Water Co. vs. City of Omaha et al.—By a contract between a city and a water company, the city was required to pay the company rentals for fire hydrants on the 1st of January and July of each year, and the company was required to install additional hydrants whenever ordered by the city, no time being fixed, however, within which it should comply with such orders. From August to December of one year the Council ordered the installation of 117 new hydrants, and the company by January 1 following had installed 49 of the same and in doing so laid four miles of new mains. January 1 the city made default in payment of the rentals then due, and had also made previous defaults, and by failing to provide for raising money for such rentals and by transferring the balance remaining in the fund to another fund had clearly indicated its intention not to pay the same. Held that, under the contract, the company was entitled to a reasonable time in which to install new hydrants when ordered, and that, so far as appeared, it had used reasonable diligence in that respect up to January 1, that the default of the city on that date, and the previous defaults and acts indicative of the purpose of the city not to pay in the future, justified it in refusing to install the remaining number ordered, and that its action neither before nor after that date constituted a breach of the contract which precluded it from recovering the rentals due then or thereafter.—United States Circuit Court of Appeals, Eighth Circuit.

INVALID CONTRACT—NO COMPETITIVE BIDDING

Mullane vs. Mayor, Etc., of City of Newark et al.—A contract by a city for street paving, entered into without a proper opportunity for competitive bidding being afforded, as required by Act March 24, 1899, regulating the method of making contracts by cities of the first class, is invalid.—Supreme Court of New Jersey.

ADOPTION OF ORDINANCE—PROCEDURE

Elliott et al. vs. Council of Newark.—Where a town charter provided that the Council should "meet at least once in every month at such time or times or place as it shall appoint," and that "special meetings may be called by the President of the Council upon his own motion or shall be called at the request of three members," and contained no provision relating to the passage of ordinances, except that "no ordinance shall be passed without the concurrence of a majority of the members of the Council unless it shall have had at least two readings at a previous stated meeting or meetings," held, that an ordinance may be adopted at a special meeting, having been read twice at the last previous stated meeting, when from the call for the special meeting it may be fairly understood that the passage of the ordinance was one of the purposes or objects for which the special meeting was called.—Court of Chancery of Delaware.

ENCROACHMENT ON STREET—NUISANCE

City of New York vs. Rice.—Neither the Assembly of the City of New York nor the Park Commissioner can, in streets lying within 350 feet of a public park, permit an encroachment of a permanent character therein. A wall 8 feet high, constituting part of a stoop and entrance to a residence, and extending beyond the building line, is a nuisance, which the city may abate by an action in equity.—New York Supreme Court.

STREET IMPROVEMENTS—BENEFITS

New York, C. & St. L. Ry. Co. vs. City of Hammond.—Witnesses who had been residents of the city for years were engaged in the real estate business and were acquainted with real estate values generally throughout the city, in the vicinity of a street improvement for which assessments were sought to be levied on defendant railroad company, were competent to testify on the question of benefits to the company's property, though they were not shown to have had knowledge of the value of the property for railroad purposes.—Supreme Court of Indiana.

NEGLIGENCE—LIABILITY OF CITY

Evans vs. City of Kankakee.—Police regulations of a city are made and enforced in the public interest, and a city is not liable for the acts of its officers in attempting to enforce them, and, the establishment and maintenance of a city calaboose falling within the proper exercise of the city's police power, a city is not liable for the wrongful or negligent acts of its police officers or board of health in managing a calaboose or detaining therein persons afflicted with smallpox, resulting in persons working or residing near by contracting the disease.—Supreme Court of Illinois.

MUNICIPAL POWERS—BONDS

Wharton vs. City of Greensboro.—Municipal Corporations are but instrumentalities of the State for the administration of local government, and their powers may be enlarged, abridged, or entirely withdrawn, at the pleasure of the Legislature. Bonds issued by the Board of Aldermen of a city, to fund a floating debt contracted for legitimate necessary expenses of the city government, are not issued for a special purpose, within the meaning of Revisal 1905, prohibiting a city from contracting any debt, etc., for any special purpose to an extent exceeding 10 per cent. of the assessed valuation of the property therein, and are valid notwithstanding Const. N. C., prohibiting municipal corporations from contracting debts except for the necessary expenses thereof, unless by a vote of a majority of the qualified voters.—Supreme Court of North Carolina.

SUFFICIENCY OF ENGINEER'S ESTIMATE

Village of Oak Park vs. Galt.—An engineer's estimate of the cost of a city sewer contained an item of "forty-six iron catch-basins seven feet deep, including nine-inch sewer pipe connections fifteen feet long, \$1,840," but the item did not specifically name nine-inch Y-junctions which the ordinance provided should be used in the improvement. Held that, inasmuch as the sewer pipe connections could not be built without the Y-junctions and those familiar with that class of work would necessarily so understand, the Y-junctions were included in the item, together with all other sewer pipe connections.—Supreme Court of Illinois.

DEFECTIVE STREET—NEGLIGENCE

Purcell vs. City of Chicago.—A city is not free of negligence, as a matter of law, where there was a hole in its street for seven or eight months, six feet long, by two feet in width and depth. The instruction, in an action for injury from a hole in a street, that the city was bound to keep its streets reasonably safe "for all persons passing over them," is not misleading as applied to the case, though the city is only required to keep them safe for persons who, in using them, are exercising reasonable care for their own safety; the jury being further instructed that plaintiff to recover must have been injured while exercising ordinary care.—Supreme Court of Illinois.

CEMETERIES—POLICE POWER

Laurel Hill Cemetery vs. City and County of San Francisco et al.—A cemetery at the time of its establishment was outside the limits of San Francisco, in unsettled territory. The municipality granted land for the cemetery, and acquiesced in the expenditure of money in improvements thereof. The city thereafter, by reason of its growth, included the cemetery within its limits, and the surrounding territory became thickly settled. Held, that the city was not estopped from exercising its police power by prohibiting further interments in the cemetery.—Supreme Court of California.

POWER TO GRANT FRANCHISES

Jeffers et al. vs. Mayor, Etc., of City of Annapolis et al.—Where a Mayor and City Council have power to grant franchises, its exercise cannot be defeated or restrained by any considerations of policy or expediency, or by any mere regard for the preference of property holders. The use of streets by an electric railway does not impose a new servitude upon the streets so as to entitle abutting lot owners to additional compensation; and hence they may not restrain the construction of such road, the company being liable at law, under the express terms of Code Pub. Gen. Laws, for any injury arising in constructing or operating the road.—Court of Appeals of Maryland.

PROPERTY SUBJECT TO LIEN

Bucanan et al. vs. Kansas City.—Where land, on which assessments for benefits from a parkway are a lien, is condemned for a park, the lien of the assessments continues against the land till title thereto is devested out of the owner by payment of the award for the condemnation thereof, and on this being paid into court, in the condemnation proceedings, attaches thereto.—Supreme Court of Missouri.

COUNCILMAN INTERESTED IN CONTRACTS

Jacques vs. City of Louisville.—The Kentucky Statutes, where a member of the Council is an officer or employee of such corporation, must be reasonably construed to prevent its evasion by a mere device.—Court of Appeals of Kentucky.

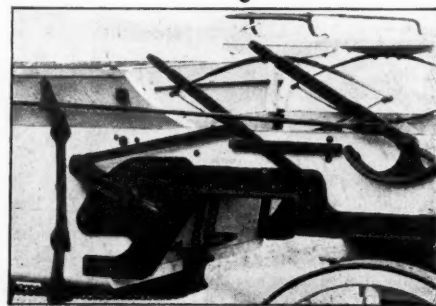
MUNICIPAL APPLIANCES

Flushing Machines

INTERESTING figures of the cost of cleaning streets by the use of the flushing machine are given in the annual report of Superintendent Neave, of Cincinnati, O. It seems that from July 1 to December 17, 1907, 116,988 city blocks were cleaned at a cost of \$85,715, whereas in 1906 124,192 blocks were cleaned at a cost of \$119,523. The cost figures for 1906, when machine sweepers were used, figure 96.3 per block, as compared with 73.2 per block for cleaning with the flushing machine. The equipment of street flushers and teams cost only \$32,766. The daily cost of water was less than \$10. Reducing the figures to a basis of 1,000 square yards, the cost is 26½ cents for flushers. The cost of cleaning by hand, taken alone, is given as 70½ cents per 1,000 yards in Cincinnati. There is also a saving to property owners, inasmuch as private street sprinkling is unnecessary. Mr. Neave does not give any credence to the theory that street flushers stop up sewers. It is true that in certain sections of Cincinnati trouble has occurred, but only in locations where, owing to defective construction, trouble always occurs after a heavy rain. The conclusions of Superintendent Neave are concurred in by officials of other cities, but such a striking comparison of cost is not always available. Superintendent G. H. Hanna, of Cleveland, O., who regularly employs twenty-four machines, night and day, says that a substantial reduction in the cost of cleaning pavements has been made over dry cleaning, and that the health of the city has greatly improved. Superintendent of Streets M. J. Doherty, of Chicago, Ill., says that the saving to merchants resulting from freedom from dust is the chief argument in favor of the flusher. These machines are manufactured by the Sanitary Street Flushing Machine Company, Carleton Building, St. Louis, Mo.

New Bottom Dump Wagon

THE F. H. Hieber Wagon Manufacturing Company, which, for a number of years, has been engaged in the manufacture of high grade business wagons, has recently placed on the market a bottom dump wagon. This wagon, called the "Victor," has a peculiar and ingenious arrangement by means of which the winding up, locking and dumping is accomplished with a single lever. The accompanying illustration shows the bottom doors drawn up and locked. When the lever is thrown back to the limit a casting, movably attached to a rod from the lever and connecting with an arm of a casting on the sprocket and windlass shaft, firmly fastens the dog in place, making it impossible for the sprocket and its shaft to move. To dump, the lever is thrown forward, the lock is released, and a second short arm, forming a part of the same casting as the longer arm mentioned above, strikes the dog and releases the sprocket. Winding up is brought about by moving the lever back and forth in the usual way, the casting that locks the dog when wagon is closed engaging the teeth of the sprocket and the dog preventing the windlass from unwinding.



NEW DUMPING DEVICE

NEWS OF THE SOCIETIES

Washington Playgrounds Association.

—A dinner was recently given by the association at Rauscher's, where covers were laid for about 300 members and guests. Commissioner H. B. F. Macfarland in an address reviewed the history of playgrounds in Washington. The speaker made the point that the word playgrounds was a misnomer — they should have been named outdoor schools. Ambassador James Bryce, of Great Britain, spoke of "The City Child." He said that nothing better could be done for the children of a city than to help to restore the opportunities for enjoying open air and play and contact with nature and the delights of free movement which our ancestors enjoyed and by which the character of the race was formed. Maj. Richard Sylvester read a paper on the subject, "Playing in the Streets." He spoke of the frequency of accidents to children in the streets. He gave statistics of arrests for crimes and misdemeanors of individuals under 16 years of age, the results of habits acquired by children in city streets. Judge Ben B. Lindsey, Judge of the Juvenile Court of Denver, Col., spoke of the "Relation of Public Playgrounds to Juvenile Delinquency."

Massachusetts Reform Club.—The subject for discussion at a meeting of the club, February 7, was "The Immediate Needs of Boston." Frederic P. Fish proposed the establishment of a board of 150 municipal advisers for the purpose of closely watching the responsible officers of the municipality, of securing complete publicity and of giving opportunities for advice and criticism at every stage of their work. Hon. Joseph Walker believed that the city ought to be managed as business corporations, by a board of directors, who should appoint an expert as chief executive officer, whose duties would correspond to those of the president of a corporation. He indorsed a bill recently introduced in the Massachusetts Legislature by Harvey N. Shepherd, to establish a Local Government Board, with power to compel a proper and uniform system of accounts in towns and cities. This Board would collect and tabulate municipal statistics. It should make examinations into the finances of cities and towns at frequent intervals, and its permission should be sought whenever money is to be borrowed. George R. Nutter expressed the opinion that what was really needed was the development of civic interest on the part of every individual.

Independent Asphalt Association.—The annual meeting of the association, composed of prominent public works contractors from many of the United States and Canada, was held, January 28, at the Plaza Hotel, Fifth avenue and Fifty-ninth street, New York City. The officers for the ensuing year are: President, Walter V. Cranford, Brooklyn; First Vice-President, P. R. Quinlan, Syracuse, N. Y.; Second Vice-President, F. H. Kirchner, Cincinnati; Treasurer, Hugo Reid, New York; Secretary, P. W. Henry, New York; Assistant Secretary, E. B. Cushing.

Engineers' Club of Minneapolis.—The following officers were elected at a recent meeting: President, L. S. Gillette; Vice-President, W. B. Cowles; Secretary, L. Clausing; Treasurer, H. A. Graw.

Engineers' Society of Western Pennsylvania.—At a recent meeting at the society's rooms, in Pittsburg, the follow-

ing officers were elected: President, J. K. Lyons; Vice-President, E. K. Moser; Treasurer, A. E. Frost. At a special meeting of the new board Richard Hirsch was elected Secretary for the ensuing year, succeeding Edmund Yardley.

Albany Society of Civil Engineers.

The following officers were elected at a recent meeting: President, George F. Chism; Vice-Presidents, R. S. Greenman, W. I. Klein, D. W. Robbins; Secretary, J. C. Finch; Treasurer, J. A. O'Connor.

Mayors' League of New Jersey.—For the purpose of securing legislation that will benefit the cities of New Jersey, Mayor Andrew F. McBride, of Paterson, proposes the organization of a Mayors' League. The matter was recently discussed at a meeting of the Finance Board. The Board realizes that a movement is necessary to bring about the gradual advancing of the fiscal year until it coincides with the time that the taxes are due, so that the city will not have to borrow about \$1,000,000 each year in anticipation of the collection of taxes in order to carry the city from March 20, the time the fiscal year now closes, to December 20, when the city's taxes become due. The City Counsel said that several other cities in the State were in a position similar to that of Paterson, and he thought their cooperation could be obtained in any effort for legislation that will bring them relief. Mayor McBride then suggested the formation of a Mayors' League, which was approved.

Civil Engineers' Club of Cleveland, O.

—At a meeting of the club on the evening of February 11 at its rooms, No. 718 Caxton Building, William J. Springborn, President of the Board of Public Service, discussed the Cleveland garbage disposal plant and the methods employed in its operation.

Calendar of Meetings

February 19.

American Society of Civil Engineers.—Regular meeting at the House of the Society, 220 West Fifty-seventh street, New York City.—Charles Warren Hunt, Secretary.

May 11-16.

American Water Works Association.—Twenty-eighth annual convention, Washington, D. C.—J. M. Diven, Secretary, 14 George street, Charleston, S. C.

June 23-26.

American Society of Civil Engineers.—Annual convention, Denver, Col.—Charles Warren Hunt, Secretary, 220 West Fifty-seventh street, New York City.

June 23-26.

American Society of Mechanical Engineers.—Annual convention, Detroit, Mich.—C. W. Rice, Secretary, 29 West 39th street, New York City.

June 23-27.

American Society for Testing Materials.—Annual meeting, Hotel Traymore, Atlantic City, N. J.—Theodore Marburg, Secretary, University of Pennsylvania, Philadelphia, Pa.

September 21-October 12.

National Association for the Study and Prevention of Tuberculosis.—International Congress, Washington, D. C.—Dr. Henry Barton Jacobs, Secretary, Baltimore, Md.—Dr. Joseph Walsh, Philadelphia, Pa. Special Secretary of the Committee on the International Congress.

PERSONALS

BONNER, HUGH, Deputy Fire Commissioner of New York City, has been named as Fire Commissioner by Mayor McClellan to succeed Francis J. Lantry, resigned; he is 69 years of age and has been a fire fighter continuously since his seventeenth year, when he joined the volunteer department. Patrick A. Whitney, corresponding secretary of Tammany Hall, has been named as Deputy.

BOOTH, HORACE N., Nutley, N. J., has

been appointed Chief of Police at a salary of \$800 per annum; he will have no regular patrolmen under him for a time at least, but a number of chancemen will be appointed.

BUSHNELL, H. E., civil engineer, and Brown, W. S., architect, have formed a partnership for the practice of their respective professions in Wilmington, Del., under the firm name of Brown & Bushnell.

DUNLOP, GEORGE T., President of the Capital Traction Company, Washington, D. C., for a number of years, died recently, aged 69 years.

FLOOD, HAMILTON, City Engineer of Quincy, Mass., since 1900, has resigned, and Randolph Bainbridge, just appointed as Commissioner of Public Works by Mayor Shea to succeed Thomas F. Burke, has been placed in temporary charge of the department; John W. McAnaney succeeds William R. Thomas as City Solicitor; Peter J. Williams again becomes Chief Engineer of the Fire Department; Chief of Police Frank E. Burrill, Inspector of Buildings Warren S. Parker and City Clerk Harrison A. Keith retain their places, while the new Board of Health consists of Dr. F. R. Burke, Cornelius N. Duggan and William J. Walsh.

FOLWELL, A. PRESCOTT, delivered an illustrated lecture on sewage and garbage disposal before a voters' meeting at Easton, Pa., on the evening of February 11.

FOX, E. C., City Engineer of Winchester, Ky., has been re-elected and John Powell has been elected City Electrician.

HAVEN, R. D., Alderman, of Duluth, Minn., has been elected Mayor of the city over Emil A. Tessman, President of the City Council, the reason being the enforcement of the anti-saloon laws.

HUDSON, J. L., has been appointed City Engineer of Portsmouth, O.

HULME, R. C., City Engineer and Manager of the Water Works Department of Belleville, Ontario, died recently, aged 72 years.

KEENE, WILLIAM F., Central Falls, R. I., has been elected City Engineer and other offices have been elected as follows: City Clerk, C. Fred Crawford; City Treasurer, Charles A. Reynolds; City Auditor, J. Adelaar St. George; City Solicitor, John N. Butman; City Sergeant, Clinton A. Wilbur; Chief Engineer of the Fire Department, William J. Lees; Assistant Chief Engineer, Henry B. Bowker; Member of the Board of Street, Water and Sewer Commissioners for three years, N. Howard Easton; Inspector of Buildings, Albert Lapierre; Sealer of Weights and Measures, Severe L. Desaulnier; City Physician and Superintendent of Health, Dr. A. R. V. Fenwick; Inspector Plumbing, George A. Simmons.

KOEHLER, OSCAR, Surveyor of Jackson County, Mo., has been appointed by the County Court as County Highway Engineer and will receive a salary of \$600 per annum, in addition to his salary of \$3,000 a year as County Surveyor and ex-officio Road and Bridge Commissioner; the position places Mr. Koehler in charge of thirty-seven road overseers, in addition to looking after \$200,000 in road work contracts every year.

KRUGER, CHARLES, Deputy Chief of the Fire Department of New York City, was killed by falling into a sub-basement while fighting a fire on Canal Street, February 14. He had served thirty-six years, having joined the department when but eighteen years of age, and was Acting Chief of the Department during the Baltimore fire, where he commanded in person, Chief Croker having at that time been put out of the department.

THE WEEK'S CONTRACT NEWS

Relating to Municipal and Public Work—Street Improvements—Paving, Road Making, Cleaning and Sprinkling—Sewerage, Water Supply and Public Lighting—Fire Equipment and Supplies—Buildings, Bridges and Street Railways—Sanitation, Garbage and Waste Disposal—Police, Parks and Miscellaneous—Proposals and Awards

To be of value this matter must be printed in the number immediately following its receipt, which makes it impossible for us to verify it all. Our sources of information are believed to be reliable, but we can not guarantee the correctness of all items. Parties in charge of proposed work are requested to send us information concerning it as early as possible; also corrections of any errors discovered.

BIDS ASKED FOR

STATE	CITY	RECEIVED UNTIL	NATURE OF WORK	ADDRESS INQUIRIES TO
Street Improvements				
New York	Brooklyn	February 19, 11 A.M.	Furnishing and delivering 30,000 paving brick, 19,000 paving block, broken trap rock and trap rock screenings	Bird S. Coler, Boro. Pres. County Commissioners.
Indiana	Indianapolis	February 20, 10 A.M.	Grading approaches to bridge over Crooked Creek, Wash. twp.	A. R. Callow, Sec'y Bd. Pub. Serv.
Ohio	Cleveland	February 20, noon	Brick paving, grading, curb, etc., various streets	Col. J. W. Pope, U. S. A., Atlanta, Ga.
Florida	Fort Barrancas	February 20, noon	Improving roadway to Barrancas Nat'l Cemetery	A. J. Hall, Pres. Bd. Pub. Serv.
Ohio	Cambridge	February 20, noon	Grading, paving, etc., 3 sts.; 4,976 cu. yds. exc.; 13,245 sq. yds. brick paving; 1,232 lin. ft. curb; 670 ft., 12-15-in. pipe sewer.	Henry Smith, Pres. Park Board.
New York	New York	February 20, 3 P.M.	Furn. gravel for parks, etc., also 15,000 cu. yds. mould on parks.	H. E. Baker, City Engineer.
New York	Watertown	February 20, 5 P.M.	Paving 4,500 sq. yds. Medina block or vit. block on brick, etc.	G. B. Findley, Boro. Engineer.
Pennsylvania	Freeport	February 20, 7:30 P.M.	Paving, etc., 2 streets, inc. 600 cu. yds. exc.; 7,500 cu. yds. fill; 4,000 lin. ft. curb; 900 ft., 15-in. sewer, etc.; also furn. mat'ls.	Fred. Dreih, Clk. Co. Com'rs.
Ohio	Cincinnati	February 21, noon	Improving Hamilton pike in Springfield township	R. K. Moth, City Engineer.
Wisconsin	Kenosha	February 21, 2 P.M.	Brick paving, 26,000 sq. yds.; stone curb, 13,000 ft.; concrete, 1,300 ft.	C. H. Wells, City Engineer.
Ohio	Newark	February 21	Paving and curbing 2 sts.; 5,015 sq. yds. brick on 8-in. gravel, 2-in. sand cushion fill; 1,779 lin. ft. sandstone curb	F. J. Leonard, Chm. Bd. Pub. Wks.
Utah	Salt Lake City	February 21	Improving First South St. etc.; paving cement walk, etc.	Nathan G. Wallace, Co. Auditor.
Indiana	Terre Haute	February 22, 11 A.M.	Constructing 2 miles 415 ft. gravel road, Henry Creek twp.	P. Jasmer, City Recorder.
Minnesota	Winona	February 24	Paving 12 blocks, Main and Center Sts., with brick	Geo. T. Barnsley, Ch. Rd. Eng'r Co.
Pennsylvania	Pittsburg	February 24	Furn. 10-ton road roller, steam or gasoline power	J. H. Jackson, City Clerk.
Indiana	Muncie	February 24	Constructing cement sidewalks	Jos. M. Snow, St. Highway Com'r.
Washington	Olympia	February 25, 2 P.M.	Grading and macadamizing State roads, Nos. 8 and 9	
New York	Cortland	February 25, 8 P.M.	Asphalt vit. brick or block paving, 15,350 sq. yds.; 6,975 ft. curb and gutter, stone or cement; 500 cu. yds. Portland concrete, etc.	D. B. Coleman, City Engineer.
Iowa	Cedar Falls	February 25	Brick paving, 5 sts.; 17,650 sq. yds. on macadam, 10,514 ft. 6 x 21-in. new curb; asphalt Wash. St., 15,790 sq. yds. on concrete, binder course, 5,108 ft. comb. curb and gutter, etc.	W. H. Merner, Mayor.
New York	Brooklyn	February 26, 11 A.M.	Asphalt and Medina sandstone paving on concrete, 2 streets	Bird S. Coler, Boro. Pres.
Ohio	Portsmouth	February 26	Furn. material brick paving, curb, etc., Findlay St.; cost, \$3,800.	Geo. H. Schneider, Pres. Bd. Pub. Ser.
Pennsylvania	Smethport	February 27, 8 P.M.	Paving Main St., according to plans, etc.	W. G. Holder, Sec'y Boro. Council.
Ohio	Cleveland	February 29, 11 A.M.	Grading, draining, paving Cleve & Wooster pike to Parma twp.	A. B. Lea, County Engineer.
South Dakota	Fort Meade	March 2, 10 A.M.	Bldg. roads, sidewalks, gutters and drains	Capt. L. C. Scherer, Q. M.
Delaware	Fort Dupont	March 2, 11 A.M.	Bldg. macadam roads, granolithic sidewalks, concrete curb and gutter and wooden bridge	Capt. J. L. Knowlton, O. M., U. S. A.
Maine	Fort Williams	March 2, 11 A.M.	Grading at Fort Williams	Capt. F. J. Morrow, U. S. A., Port'd.
Indiana	Vevay	March 2, 1 P.M.	Bldg. 1 mile and 976 ft.; also 1 mile and 4,391 ft. gravel road	L. J. Woolen, Co. Auditor.
Lisbon	Lisbon	March 2, 1 P.M.	Grading highway leading from E. Liverpool; 38,211 cu. yds.	R. G. Boyd, Chm. Co. Comrs.
Indiana	Salem	March 2, 1:30 P.M.	Bldg. road 9,290 ft. long, Vernon twp.; 4 roads, 39,042 ft.; Jackson twp.	Sam. G. Ellis, Co. Auditor.
Virginia	Fort Hunt	March 2, 2 P.M.	Macadam roads, brick gutters, concrete abutments, etc.	Quartermaster U. S. A.
Tennessee	Payetteville	March 2, 7 P.M.	Grading and constructing 4 or 5 miles of sidewalks, asphalt or concrete, not less than 4 1/2 ft. wide; begin May 1	D. M. Goodner, Mayor.
New York	Fort Terry	March 2, 11:30 P.M.	Bldg. 3,400 lin. ft. macadam; 1,200 lin. ft. dirt roads	Capt. Wm. E. Horton, O. M., U. S. A.
Pennsylvania	Titusville	March 2	Paving 3 sts. vit. brick or block, 8,645 sq. yds.	H. A. Holstein, City Engineer.
Indiana	Lebanon	March 2	Two gravel roads, Clinton twp., 10,512 and 11,830 ft. long	B. F. Herdneck, County Auditor.
Illinois	Ottawa	March 2	Constructing 42,000 sq. yds. of paving	James F. Farrell, Mayor.
Pennsylvania	Erie	March 2	Paving portions of Ninth and Twelfth Sts.	B. E. Briggs, City Engineer.
Indiana	Monticello	March 3, noon	Constructing 3,975 ft. stone road in Jackson township	J. L. Ackerman, Co. Auditor.
Indiana	Peru	March 3, 1 P.M.	Grading, paving, draining, etc., 7 gravel roads, etc.	Charles Griswold, Co. Auditor.
Indiana	Spencer	March 3	Constructing five pipe roads, 39,516 ft. long	Geo. W. Edwards, Co. Auditor.
Ohio	New Philadelphia	March 3	Grading Walton road, 1 mile south of New Philadelphia	A. V. Denahy, County Auditor.
Indiana	Peru	March 4, 10 A.M.	Improving highway 2 1/2 miles long on County line	Charles Griswold, Co. Auditor.
New York	Corning	March 5, noon	Brick paving, 16,250 sq. yds.; macadam, 4,250 sq. yds., both jobs with cement curbs and gutters	J. T. Hall, Clk., Bd. Pub. Works.
Wisconsin	Racine	March 7, 10 A.M.	Paving N. W. Ave., inc. 5,412 sq. yds. brick pavement; 1,161 lin. ft. concrete gutter; 1,118 ft. comb. curb and gutter; 947 cu. yds. exc.	P. H. Connolly, City Engineer.
Wisconsin	Neenah	March 16	Constructing 9,000 yds. brick paving, Wisconsin Ave.	H. L. Sweet, City Engineer.
New York	Fort Wood	April 1, 11:30 A.M.	Constructing roads and walks at post	C. C. Burnell, O. M., U. S. A.
Minnesota	Fork	May 1	Constructing five miles of roads	J. P. Lein, Township Clerk.
Water Supply				
Massachusetts	Springfield	February 24, noon	Furn. c. i. pipe and specials; must conform to N. E. W. W. A. specifications, inc. 19,085 tons, 6-36-in. Class E, 285.5 tons 4-42-in. Class C	E. E. Lochridge, Ch. Engr. W. Com'rs.
California	Sacramento	February 24	Furn. 2,570 and 1,200 pieces, 12, 8 and 6-in. c. i. pipe, respect'ly	M. J. Desmond, City Clerk.
Minnesota	Stillwater	February 25	Water works for new State prison; cost, \$35,000	State Bd. of Control, St. Paul.
Alabama	Fort Morgan	February 27, 2 P.M.	Furn. and installing two 50-h.p. horizontal tubular boilers, 2 compound duplex pumps, 150 h.p. feed-water heater, and purification system, feed-pump and inspirator	Capt. L. F. Garrard, Jr., U. S. A.
North Carolina	Rockingham	February 27	Bldg. part W. W. plant, inc. laying, but not furn., 4 miles pipe, water tower, pumping station and reservoir; bids from architect later	Gilbert C. White, Durham, C. E.
New York	Brewster	February 28, 8 P.M.	Laying c. i. pipe, etc., building concrete reservoir	Richard Mitchell, Village Clerk.
Maine	Kittery	February 29, 1 P.M.	Laying 6 miles, 4, 6, 8 and 10-in. water mains	L. E. Scruton, Civil Engineer.
North Dakota	Lisbon	March 2	Constructing and piping two 8-in. artesian wells	M. E. Moore, City Auditor.
Pennsylvania	Philadelphia	March 3, noon	Pumping engines for Roxboro and Belmont stations; cont. 138	Wm. R. Knight, Act. Dir. Bur. Water.
Texas	Dallas	March 3, 3 P.M.	Furn. 10,000,000-gal. high-service vertical triple expansion condensing crank and fly wheel pump or other engine	J. B. Winslett, City Secretary.
Georgia	Rome	March 9	Gravity filter, 500,000 gal. capacity per 24 hours	M. J. Morrell, Supt. Water Works.
Indiana	Elkhart	March 11, 10 A.M.	Furn. for 25 yrs. from April 28, 1909, ample supply of water for all domestic and public uses, inc. fire protection	A. T. Maltby, Chicago, Ill., Cons. Eng.
California	Oakland	March 18, 11 A.M.	Labor and material for constructing salt water pumping plant; specifications, etc., at MUN. JOUR.	Walter B. Fawcett, Sec'y Bd. Pub. W.
Sewerage				
Maryland	Baltimore	February 19, 11 A.M.	Bldg. West Low Level Interceptor, Sec. No. 3; 1,876 ft. 66-in. sewer; 1,355 ft. 60-in., 80 ft. 30-in., 2 bell mouths	Peter Leary, Jr., Chm. Sewer Com.
New York	Brooklyn	February 19, 11 A.M.	Furn. and delivering 2,000 lin. ft. 6-12-in. vit. sewer pipe	Bird S. Coler, Boro. Pres.
Ohio	Eaton	February 19, noon	Constructing sewers and a disposal plant, inc. 109,500 ft. 6-24-in. sewer pipe; 8,830 ft., 27-42-in. brick or concrete sewer, manholes, etc., 4-24-ft. deep	A. L. Reid, City Engineer.
Ohio	Cambridge	February 20, noon	670 ft. 12-15-in. sewer pipe, 1,000 ft. 4-in. tiling, 10 catch basins, etc.	D. M. Hoge, City Engineer.
Idaho	Boise City	February 20	Constructing sewers, manholes, flush tanks, Dist. No. 107, inc. 1,221 ft. 8-in. vit. pipe, 1,835 ft. 2-in. galvanized and 3,405 ft. 3 and 4-in. wood pipe, 2 settling tanks, 34 manholes, etc.	Jos. Perrault, Pres. Bd. Pub. Works.

Sewerage—Continued.

Missouri.....	St. Louis.....	February 20.....	Constructing sewers in several streets.....	A. J. O'Reilly, Pres. Bd. Local Imp.
Ohio.....	Newark.....	February 20.....	Bldg. sewer 20 in 3 sts., inc. 2,592 ft. 10-15-in. tile, 10 catch basins,.....	C. H. Wells, City Engineer.
Utah.....	Salt Lake City.....	February 21, 3:30 P.M.....	Constructing pipe sewers, paving, etc., various sts.....	L. C. Kelsey, City Engineer.
Ohio.....	Mingo Junction.....	February 24, noon.....	Furnishing labor and material for sewers in Dist. No. 2.....	Frank McLister, Village Clerk.
Dist. of Col. bia.....	Takoma Park.....	February 24.....	Constructing sewer system on Armory hosp. reserv., inc. sewage tank, pump pit, pumps and motor.....	Capt. H. L. Pettus, Q. M., U. S. A.
New York.....	St. George, N. B.....	February 25, noon.....	Bldg. temporary combined sewer, etc., Dist. No. 18-A, 3rd Wd.....	Geo. Cromwell, Pres. Boro Richm'd.
Dist. of Col. bia.....	Washington.....	February 25, 2 P.M.....	Furnishing District with terra cotta sewer pipe.....	Jay J. Morrow, Eng'r Com'r.
Ohio.....	U. Sandusky.....	February 27, noon.....	Bldg. 4,268 ft. 15-24-in. main trunk vit. pipe sewer.....	Riggs & Sherman Co., Toledo, Constructing Engineers.
Ohio.....	Mingo Junction.....	March 1.....	Bldg. Concrete or brick sewers, to cost \$25,000.....	S. E. Floyd, Wintersville, C. E.
Indiana.....	Aurora.....	March 2, 7 P.M.....	Bldg. vit. pipe sewer, 6-20-in., Dist. No. 1; cost \$12,500.....	Frank D. Johnston, City Clerk.
Iowa.....	Red Oak.....	March 2, 7:30 P.M.....	Bldg. 3,450 ft. 10-in., 1,600 ft. 8-in. vit. pipe sewers.....	C. M. Kelly, City Clerk.
Iowa.....	Ottumwa.....	March 2.....	Constructing 1,425 ft. Mill St. trunk sewers, 8.3 ft. diam., 3 rings brick, Portland cement, plank and concrete foundation where required; 14-ft. trench.....	J. T. Brady, City Engineer.
Kansas.....	Wichita.....	March 2.....	Bldg. sanitary sewer, Dist. No. 8: 121,441 ft. 25 to 8-in. sewer, brick, concrete or tile; 717 obs. holes; 364 manholes; 54 flush tanks; outlet protector.....	R. N. Dorr, City Clerk.
Mississippi.....	Charleston.....	March 3, 10 A.M.....	Constructing main ditch, 4 x 20 ft., 4 miles long.....	E. Bacon, Sec'y, Co. Drain Com'rs.
Michigan.....	Marquette.....	March 3, 3 P.M.....	Bldg. 6-in. tile sewers in Fourth and Genesee Sts.....	J. F. Anderson, Clk. St. Com'rs.
Wisconsin.....	Lake Mills.....	March 3.....	Bldg. 771 ft. 8-in., 1,229 ft. 6-in. vit. pipe sewers, Dist. No. 2.....	W. G. Kirchoffer, Madison, C. E.
Indiana.....	Gary.....	March 10, 2 P.M.....	Constructing several sewers.....	C. O. Holmes, Clk. Bd. Trustees.
New York.....	Auburn.....	March 17, 8 P.M.....	Bldg. sewers and disposal plant; 4 wards, \$100,000, inc. 14,700 ft. 8 in., 11,300 ft. 10 in.; 6,000 ft., 20 in.; 3,600 ft., 15 in.; 300 ft., 18 in.; 1,250 ft. 20 in.; 16,000 cu. yds. exc., 5 to 18 ft. deep; 17,000 ft., 5-in. vit. tile; also 20,000 ft., 4 in.; 6,000 ft., 6 in.; 7,000 ft., 8 in.; 2,000 ft., 10 in.; 200 ft., 12 in., of seconds; 84 manholes, 9 ft. deep; 12 flush tanks; 12 lamp holes; also reinforced concrete septic tanks and contact beds and auto. closing appliances.....	W. Thomas Wooley, City Engineer.
Ohio.....	Jackson.....	March 25.....	Bldg. 1 1/2 miles sanitary sewers; estimated cost, \$15,000.....	J. W. Turner, Village Engineer.
Public Buildings				
Pennsylvania.....	Pittsburg.....	February 19.....	Preliminary plans, etc., 2 engine houses and hose house; costs, \$25,000; \$30,000, and \$12,500.....	Geo. W. Guthrie, Mayor.
Louisiana.....	New Orleans.....	February 20, noon.....	Erecting, etc., 5-story fireproof Delgado Mem. Hospital.....	Crosby & Henkel, Morris Bldg., Arch.
Missouri.....	Maryville.....	February 20, 1 P.M.....	Constructing Nodaway County Poor House.....	A. A. Seavey, Architect.
Dist. of Col. bia.....	Washington.....	February 20, 2 P.M.....	Putting in place, complete, flooring of Tenn. marble or Venetian mosaic, etc., wall bases, ornamental iron work, terra cotta, fire-proofing, etc., National Museum building.....	Bernard R. Green, Supt. Constr.
Pennsylvania.....	Kingston.....	February 20.....	Constructing a school at Kingston, Wilkes-Barre P. O.....	W. J. Trembath, Secretary.
Illinois.....	Springfield.....	February 20.....	Erecting 8-room addition to Enos school; cost, \$30,000.....	Geo. H. Helmle, Architect.
Michigan.....	Grand Rapids.....	February 20.....	Mason work, boiler, galv. iron, etc., N. Div. St. School.....	Thos. D. Perry, Bus. Mgr., Bd. Educ.
Michigan.....	Flint.....	February 20.....	Erecting City Hall, except lighting, etc., cost, \$65,000 to \$75,000.....	Van Leyen & Schilling, Detroit, Archs.
Wisconsin.....	Green Bay.....	February 20.....	Erecting \$45,000 county jail.....	Foeller & Schober, Architect.
Indiana.....	Sharpville.....	February 21, 10 A.M.....	Bldg. 2-story and base, brick school, complete; cost, \$30,000.....	J. T. Johnson & Co., Architects.
Arkansas.....	Pine Bluff.....	February 21, 3 P.M.....	Constructing, complete, U. S. Post Office.....	James Knox Taylor, Wash., D. C.
Virginia.....	Barnesville.....	February 21.....	Erecting school; plans by A. C. Lyons, Arch., Fairmount, W. Va.....	T. W. Boydston, Sec'y Bd. Educ.
Massachusetts.....	S. Hadley Falls.....	February 22.....	Competitive plans for combination Town Hall and School bldg; also for 4-room school, with assembly hall, etc.....	M. J. Judge, Sec'y Sp. Com.
Minnesota.....	Caledonia.....	February 22.....	Erecting a School, District No. 71.....	J. G. Alstad Clk., School Board.
Virginia.....	Fort Myer.....	February 24, 11 A.M.....	Erecting 4 sets officers' quarters, barracks, etc.....	Capt. B. B. Hyer, Q. M., U. S. A.
Wisconsin.....	Madison.....	February 24, noon.....	Structural steel work for east wing of new Capitol.....	Geo. B. Post & Sons, N.Y., City Arch.
California.....	Garden Grove.....	February 24, 4 P.M.....	Bldg. 8-room and assembly hall school.....	A. C. Smith, Los Angeles, Arch.
Minnesota.....	St. Paul.....	February 24.....	Bldg. \$30,000 school; remodeling one, \$15,000.....	Jno. J. O'Brien, Sec'y Bd. Educ.
Nevada.....	Reno.....	February 24.....	Erecting south Side fire station.....	H. E. Christie, City Clerk.
Ohio.....	Cleveland.....	February 25, noon.....	Mason and steel work, superstructure W. Side Market.....	A. R. Callow, Sec'y Bd. Pub. Serv.
Wisconsin.....	Marinette.....	February 25, 3 P.M.....	Constructing U. S. Post Office.....	James Knox Taylor, Wash., D. C.
Mississippi.....	Magnolia.....	February 25.....	Erecting a brick school to cost \$25,000.....	W. J. Bryan, New Orleans, La., Archs.
Kansas.....	Solomon City.....	February 25.....	Constructing 12-room school building.....	Wilmarth & Zerbe, Salina, Arch.
New York.....	Sohawk.....	February 25.....	Repairs, improvements, etc., to State armory.....	F. A. McNeely, Sec'y Armory Com., Albany.
Pennsylvania.....	Sayre.....	February 25.....	Erecting \$20,000 town hall and Fire Dept. building.....	Pierce & Bickford, Elmira, N. Y., Architects.
Louisiana.....	Estherwood.....	February 25.....	Erecting a brick school; plans R. A. Nockton, Archt., Crowley.....	P. B. Lewis, Chm. Bldg. Com.
Wisconsin.....	Madison.....	February 26.....	Erecting two normal schools; cost, \$180,000 to \$190,000 each.....	Van Ryn & De Gelleke, Mil'kee, Arch.
Wisconsin.....	Beloit.....	February 26.....	Building a hose station.....	J. A. Love, Clk., Fire Board.
Kansas.....	Topeka.....	February 27, 2 P.M.....	Custodial bldg. at Winfield, etc.; also 2 brick annexes St. Hosp.....	John F. Stanton, State Architect.
Wisconsin.....	Milwaukee.....	February 27.....	Bldg. 3-story normal school, 45 rooms and hall with 900 seats, press brick, stone trimmings, etc., cost, \$220,000 complete.....	Van Ryn & De Gelleke, Archs.
Alabama.....	Tuscaloosa.....	February 28, 3 P.M.....	Constructing, except elevators, Federal Building.....	James Knox Taylor, Wash., D. C.
Ohio.....	Toledo.....	February 29, noon.....	Constructing 8-room addition to Fulton St. School.....	L. I. Donat, Clk. Bd. Educ.
Ohio.....	Bradford.....	February 29.....	Erecting 2-story, 12-room and auditorium brick school.....	J. T. Arnold, Clk. Bd. Educ.
Illinois.....	Belmont.....	February 29.....	Masonry, carpentry, sheet metal work, etc., for school.....	J. W. Gaddis, Vincennes, Ind., Archt.
Michigan.....	Bark River.....	February 29.....	Bldg. school in Dist. No. 3; plans at Jno. Vederbrand's office.....	C. D. Hakes, School Director.
Wisconsin.....	Delavan.....	February 29.....	Erecting \$35,000 girls' dormitory School for Deaf.....	Howland Russell, Archt., Milwaukee.
Wisconsin.....	Madison.....	March 2, 10 A.M.....	Constructing women's building; University of Wisconsin.....	M. E. McCaffrey, Act. Sec'y Univ.
Colorado.....	Colorado Springs.....	March 2, 3 P.M.....	Constructing, complete, Federal Building.....	James Knox Taylor, Wash., D. C.
Wisconsin.....	Edgerton.....	March 2.....	Building \$40,000 Mem. high school; 2-story brick.....	Leonhouts & Guthrie, Milwaukee, Architects.
Iowa.....	Waukon.....	March 2.....	Ventilating and heating plant in Public School.....	E. D. Purdy, Sec'y School Bd.
Ohio.....	Cincinnati.....	March 2.....	Constructing 12-room school, Hoople and Terrace Sts.....	Dr. J. M. Withrow, Bd. Educ.
Kansas.....	Winfield.....	March 2.....	Plans for \$80,000 Court House, jail and jailer's residence.....	County Board.
Michigan.....	Saginaw.....	March 2.....	Building 4-story, 110 x 180 ft. auditorium; cost, \$100,000.....	W. T. Cooper, 308 Hayden St., Arch.
Ohio.....	Akron.....	March 2.....	Material and labor, separate, for bldg. Portage Path School.....	J. F. Barnhart, Clk. Bd. Educ.
Virginia.....	Bedford City.....	March 2.....	Erecting \$15,000 County jail; plans F. P. Milburn & Co., Wash., D. C.....	B. W. Hubbard, Forest Depot.
Massachusetts.....	Fort Andrews.....	March 3, 10 A.M.....	Erecting, complete, additions to brick hospital.....	Capt. I. L. Fredenhal, O. M., U. S. A.
Ohio.....	Akron.....	March 3, noon.....	Erecting Portage Path School, plans by Harpster & Bliss.....	F. G. Marsh, Pres., Bd. Educ.
Indiana.....	Connersville.....	March 3.....	Making improvements at County Court House.....	J. L. Kennedy, Co. Auditor.
Ohio.....	Cincinnati.....	March 3.....	Bldg. annexes to 2 schools; exc. and found., Woodward H. S.....	Dr. J. M. Withrow, Bd. Educ.
Nevada.....	Carson City.....	March 3.....	Erecting school bldg., etc., Carson City Indian School.....	Calvin H. Asbury, Supt. Sch. Stew't.
Minnesota.....	Duluth.....	March 4, 3 P.M.....	Constructing, complete, extension to Federal Building.....	James Knox Taylor, Wash., D. C.
Minnesota.....	Red Wing.....	March 5, 3 P.M.....	Constructing, complete, U. S. Post Office.....	James Knox Taylor, Wash., D. C.
South Dakota.....	Chamberlain.....	March 5.....	Furn. material and enlarging dormitory at Indian School.....	S. A. M. Young, Supt. Indian School.
Michigan.....	Mt. Pleasant.....	March 6.....	Physical training bldg. for Cen. Mich. Normal School.....	E. W. Arnold, Battle Creek, Arch.
Louisiana.....	Marksville.....	March 9.....	Bldg. 2-story and basement brick school.....	Favrot & Livandais, Ltd., New Orleans, Architects.
California.....	Cahuilla.....	March 10, 2 P.M.....	Constructing school at Cahuilla Indian School.....	C. L. Swain, Aquangua, Supt. Ind. Sch.
South Carolina.....	Greenville.....	March 10, 3 P.M.....	Extending, remodeling, etc., Federal Building.....	James Knox Taylor, Wash., D. C.
Iowa.....	Clinton.....	March 10, 8 P.M.....	Erecting fire station at No. 4; separate bids for heating.....	William E. Hayes, City Clerk.
New York.....	Rochester.....	March 12, 3 P.M.....	Constructing, complete, except elevator, exten. to Federal Bldg.....	James Knox Taylor, Wash., D. C.
Minnesota.....	Pipestone.....	March 12.....	Erecting hospital building at Indian School.....	W. S. Campbell, Supt. Ind. School.
Indiana.....	Anderson.....	March 15.....	Erecting \$125,000 high school, R. P. Daggett & Co., Architects.....	J. D. Pearcey, Supt. School Bd.
Iowa.....	Des Moines.....	March 15.....	Erecting new City Hall, to cost about \$250,000.....	Proudfoot & Bird, Crocker Bldg. Architects.
Florida.....	Pensacola.....	March 16, 3 P.M.....	Bldg. quarters and hospital bldgs. Santa Rosa Quar. Station.....	James Knox Taylor, Wash., D. C.
Wisconsin.....	Rhineland.....	March 23, 2 P.M.....	Bldg. fireproof Co. Court House; cost, \$100,000.....	Arthur Taylor, Chm. Bldg. Com.
Virginia.....	Richmond.....	March 23.....	Erecting combined market and armory building; cost, \$100,000; also designs, drawings, etc.....	C. E. Bolling, City Engineer.
Pennsylvania.....	New Castle.....	May 1.....	Erecting 3-story brick and stone high school, 200 x 190 ft., estimated cost, \$250,000.....	W. G. Echles, Lawrence, Tr. Bldg. Architect.
Bridges				
Florida.....	Fort Barrancas.....	February 20, noon.....	Rebuilding bridge over Bayou Grande; also improving road.....	Quartermaster, U. S. Army.
Manitoba.....	Brandon.....	February 20, noon.....	Bldg. rein. concrete or steel bridges and approaches.....	Harry Brown, City Clerk.
Illinois.....	Pekin.....	February 20.....	Repairing Hoigson bridge in Elm Grove township.....	Bridge Com. Co. Bd. Supervisors.
Ohio.....	Toledo.....	February 21.....	Bldg. 2 concrete masonry abutments for bridge, Wash. twp.....	L. B. Bailey, Lucas Co. Com'r.

Bridges—Continued.

Nebraska	Lincoln	February 24, 2 P.M.	Constructing all bridges in Lancaster County for one year; about 95 wooden and 5 iron structures.	W. L. Dawson, County Clerk.
New Brunswick	Fredericton	February 24	Metal superstructures, 4 bridges; 2 spans, 160 ft. each; 3 spans, 63 ft. each; 3-span, 117 ft. each; 2-span, 86 ft. each.	C. H. La Billois, Com. Pub. Works.
Kansas	Center	February 24	Constructing stone arch bridge.	O. H. McComae, Township Trustee.
Louisiana	Alexandria	February 24	Steel span bridge, pile trestle approach.	Ira W. Sylvester, Cons. Eng'r.
Pennsylvania	Wilkes-Barre	February 25	Repair sub and superstructure steel truss bridge.	Jas. M. Norris, Co. Controller.
Minnesota	Borup	February 25	Bldg. several bridges over ditches, 26-30 ft. long, Viding twp.	F. W. Horn, Clk. Viding Twp., Route No. 1.
Ohio	Cleveland	February 26, 11 A.M.	Constructing steel-concrete bridge, Brooklyn township.	A. B. Lea, County Engineer.
Connecticut	Hartford	February 26	Furn. and erecting tunnel roof beams in connection with western approach to Conn. Ave. bridge.	Morgan G. Bulkley, Pres. Boro. and Highway Districts.
Ontario	Mallorytown	February 29	Bldg. bridge over Jones Creek, at or near site of present one.	M. J. Connolly, Clk., Front of Yonge.
Kansas	Westmoreland	February 29	Constructing stone arch bridge over Hopkins Creek.	Alois Umscheid, care of Co. Surveyor.
Ohio	West Point	February 29	Bldg. rein. conc. arch or through girder bridge and store piers.	R. G. Boyd, Chm. Co. Com'rs, Lisbon.
Virginia	Lynchburg	February 29	Bldg. concrete viaduct on D St., to cost \$30,000.	H. L. Shaner, City Engineer.
Mexico	Monterey	March 1	Bldg. steel superstructure, two 74-ft., 2-in span bridge, etc., row of stores and st. railway, also for propositions with diagrams for bridge, etc.	Alfred Giles, San Antonio, Tex., C. E.
Mississippi	Gulfport	March 2	Bldg. drawbridge over river, near Morris's Ferry.	F. S. Hewes, County Clerk.
Ohio	New Philadelphia	March 2	Repairs to steel bridge, Canal Dover; superstructure concrete concrete bridge.	Board of County Commissioners.
Washington	Wenatchee	March 3, 10 A.M.	Bldg. trestle bridge over dry gulch, Co. road No. 175, Sec. 14.	John Godfrey, Clk. Co. Com'rs.
Nebraska	Neligh	March 3, noon	Bldg. all Co. bridges, 20 to 100 ft. long, during 1908.	W. H. Morgan, County Board.
Iowa	Red Oak	March 3	Erecting eleven 48-ft. steel bridges with 16-ft. roadways.	Wm. Cozard, Pres. Bd. Co. Superv.
California	Quincy	March 4, 10 A.M.	Bldg. 6 steel bridges; also 2 steel approaches, each one separate.	H. P. McBeth, Clk. Bd. Co. Superv.
Wisconsin	Eau Claire	March 4	Bldg. bridge and movable dam over Chippewa River; cost, \$60,000.	Lang & McNulty, Con. Eng'rs.
Minnesota	Fergus Falls	March 6, 8 P.M.	Bldg. rein. concrete bridge; also with plans, etc.	C. A. P. Turner, Minnpls., C. E.
Ohio	Cleveland	March 7	Bldg. concrete abutment; also steel-concrete culvert.	A. B. Lea, County Surveyor.
Alabama	Birmingham	March 10, noon	Furnishing material and constructing 8 steel or reinforced concrete highway bridges.	P. S. Milner, County Engineer.
Minnesota	Watertown	March 31	Furn. 7,000 ft. white oak bridge plank, 3-in. thick, 16 ft.	J. F. Boylan, Village Recorder.

Lighting and Electricity

New York	West Point	February 20, noon	Furn. and installing light fixtures in 5 bldgs.	Quartermaster, Military Academy.
Maryland	Annapolis	February 21, noon	Power house work and materials at Naval Academy.	Ernest Flagg, 35 Wall St., N. Y. City, Architect.
Virginia	Nat'l Sold. Home	February 21	Furn. material and remodeling electric wiring, 2 bldgs.	John T. Hume, Pres. N. H. D. V. S.
Dist. of Col'bia	Washington	Feb. 24, 10:30 A.M.	Furn. electrical material, coaling crane, hoisting chains, track bolts, sheet copper, steel channels, etc.	Col. H. F. Hodges, Ist. Canal Com.
New York	Brooklyn	February 24, 11 A.M.	Repairs to electric equipment in Public School 109.	C. B. J. Snyder, Supt. School Bldgs.
Illinois	Chicago	February 24, 3 P.M.	Lamp brackets for Federal Building.	James Knox Taylor, Wash., D. C.
New Jersey	Atlantic City	Feb. 24, 8:30 P.M.	Bldg. electric lighting standards and foundations, inc. 78 corner and 200 intermediate foundations and standards, 7,000 sq. ft. cement paving laid or relaid, etc.	John Donnelly, Chm. Light Com.
Iowa	Ft. Des Moines	February 24	Electric wiring, fixtures, etc., 4 sets officers' quarters.	Capt. J. J. Boniface, Q. M., U. S. A.
Georgia	Augusta	February 25, 3 P.M.	Furn. electric switchboard, motor, generator sets, motors, air compressor, pneumatic hammer, cranes, etc.	Commanding Officer, Arsenal.
Wisconsin	Waterloo	February 25	Two-piece c. i. engine flywheel for belt drive, 12,000 lbs. for 1 p. m.; also 42-in. steel stack, 8½ ft. high, with breeching to boiler.	F. E. Peschel, Village Clerk.
Virginia	E. Radford	March 1	Incandescent and arc lights for electricity and gas.	J. C. Bird, Clerk of Council.
Connecticut	Scotland	March 2	Bldg. power house above found.; also bldg. rein. concrete dam on earth bottom, 200 ft. long for 25-ft. head, Shetucket river.	Uncas Power Co., Norwich.
Pennsylvania	Titusville	March 2	Installing fire alarm system, inc. 2 indicators, 1 gong, 1 bell strike, 25 or more fire alarm boxes.	W. M. Dame, City Clerk.
Minnesota	Jackson	March 4, 11 A.M.	Installing electric light fixtures, new Court House; cost, \$1,600.	P. D. McKellar, Co. Auditor.
Florida	Jacksonville	March 4, 3 P.M.	Purchase of old machinery at electric light station.	R. N. Ellis, Supt. El. Lt. & W. W.
Washington	Bremerton	March 10	Two 10-ton, 3-motor electric traveling cranes.	Commandant Navy Yard.
Wisconsin	Sheboygan	March 16, 7:30 P.M.	For 25-yr. franchise for establishment, maintenance and operation of electric light plant and system.	Pres. and Trustees of Village.
California	Los Angeles	March 17, 3 P.M.	Installing conduit and wiring system at Federal Building.	James Knox Taylor, Wash., D. C.
Illinois	N. Chicago	March 18, noon	Power plant equipment, in power house, Naval Train Station.	Admiral J. E. Pillsbury, Wash., D. C.
Indiana	Mt. Vernon	April 1	Lighting streets for 10 yrs., from July 1, 1909 with electric lights, plant to consist of 85 2,000 c.p. enclosed arc lamps; 11 yr. franchise for commercial and residence lighting, 900 with contract.	Henry Kling, City Clerk.
Dist. of Col'bia	Washington	April 6	Furn. electrical sup. to Bur. E. & Pr., 1 year from July 1.	Director Sullivan, B. E. & P.
Louisiana	Lecompte	April 7	Bldg. electric light plant, to cost \$10,000, steam operated.	W. H. Jones, City Clerk.
Georgia	Lafayette	May 1	Constructing electric lighting plant.	J. A. Clements, City Recorder.

Miscellaneous

New York	Brooklyn	February 19, 11 A.M.	Furn. oil sprinkler and parts; 3 tar melting and gravel heating trucks; 3 road machines; 3 extra sets of blades; wheel scraper and 2 drag scrapers; 30,000 paving brick; 10,000 Medina sandstone; 5,000 wooden, 2,000 asphalt and 2,000 iron slag paving blocks; 10,700 cu. yds. broken traprock and 5,925 screenings; 200 bbls. Rosendale cement; 2 asphalt steam rollers; 1,000 cu. yds. binder stone; 600,000 cu. yds. paving pitch or cement.	Bird S. Coler, Boro. Pres.
Montana	Butte	February 19	Furnishing third-class steam fire engine.	M. A. Berger, City Clerk.
Arizona	Fort Huachuca	February 20, 11 A.M.	Constructing a swimming pool.	C. A. H. McCauley, Denver, Colo., Ch. Q. M., U. S. A.
Delaware	Wilmington	February 20, 11 A.M.	Bldg. conc. base, tower and walk, Schomer Lodge Light Sta., Pa.	U. S. Light House Engineer.
Washington	Seattle	February 20, noon	Furnishing stone for Grays Harbor, Wash.	Maj. H. M. Chittenden, Engr. Corps.
New York	New York	February 20, 3 P.M.	Metal shelving in various vaults, U. S. Custom House.	Architect, 11 E. 24th St.
Ohio	Cleveland	February 20	Dredging 250,000 cu. yds. Cuyahoga River.	A. R. Callow, Sec'y Bd. Pub. Serv.
Pennsylvania	Pittsburg	February 20	Fencing about 3,400 ft. along Dravesburg road.	F. P. Booth, Co. Controller.
Pennsylvania	Wilkes-Barre	February 21, noon	Cleaning and sprinkling paved streets of city.	Fred H. Gates, City Clerk.
Maryland	Fort Howard	Feb'y 21, 1:30 P.M.	Rebuilding government wharf at Fort Armistead.	Quartermaster, U. S. Army.
Dist. of Col'bia	Washington	Feb'y 24, 10:30 A.M.	Furn. garbage cans, iron conduit, wire, etc.	Col. H. F. Hodges, Ist. Canal Com.
New York	New York	Feb. 24, 10:30 A.M.	Furn. system for high pressure; 3 extra large-size hose wagons; 12 wagon nozzles (standpipes); 12 pine holders, complete; also 9 wagon nozzles and 12 pipe holders, complete, for Brooklyn high-pressure system.	Hugh Bonner, Fire Commissioner.
Pennsylvania	Pittsburg	February 24, noon	Furn. three 400-gal. road sprinklers, central discharge.	F. P. Booth, County Controller.
Wisconsin	Milwaukee	February 24, 2 P.M.	Bldg. rein. concrete caisson, break-water pile pier, and plank cribs, removing old piers and dredging.	W. V. Judson, Maj. Eng'rs, U. S. A.
Pennsylvania	Ambler	February 27, 8 P.M.	Garbage disposal for borough.	H. V. Everham, Sr., Secretary.
Georgia	Atlanta	February 28, 10 A.M.	Furn. and delivering 10,000 bbls. American Portland cement; also ice-making or refrigerating machines complete; and 6,000 ft. 3-in. conduits, 325 outlet boxes, covers, nuts, etc.	R. V. LaDow, Supt. Prisons, Dept. Justice, Washington, D. C.
New York	New York	February 29, 11 A.M.	Furn. a. c. electric elevator, 2 machines, 3 belted motors.	Admiral R. C. Hollyday, Wash., D. C.
New Brunswick	St. Johns	February 29	Bldg. extension to wharf at Moncton, Westoult Co., N. B.	E. T. P. Shewen, Res. Eng'r.
California	Sacramento	March 2, 8 P.M.	Furn. 10-ton steam roller of modern and approved style.	M. J. Desmond, City Clerk.
Ohio	Springfield	March 2	Dredging and cleaning Buck Creek.	William Mahoney, City Clerk.
California	Santa Monica	March 2	Constructing pier at Colorado avenue.	Thos. H. James, City Engineer.
Ontario	Toronto	March 2	Construct'g new western entrance to city harbor; 48,000 check p. w.	Fred Gelinis, Ottawa, Sec'y Dep't P. W.
Rhode Island	Fort Wetherill	March 4	Constructing addition to wharf.	W. C. Metcalf, Newport, Q. M., U. S. A.
Dist. of Col'bia	Washington	March 12, 10:30 A.M.	Furn. Portland cement; 4,500,000 bbls. to be used.	Col. H. F. Hodges, Ist. Canal Com.
Florida	Key West	March 12, 11 A.M.	Furnishing 125 h.p. steam boiler, with accessories.	Capt. Conrad H. Lanza, Q. M. U. S. A.
Ontario	Peterboro	March 12	Work on Sec. 3, Ontario-Rice Lake Div. Trent Canal.	L. W. Jones, Ottawa, Sec'y, D. R. & C.
New York	Buffalo	March 14	Constructing concrete walls for ship lock.	H. M. Adams, Eng'r Corps, U. S. A.
Michigan	Sault Ste Marie	March 15	Widening Sault Ste Marie canal.	U. S. Engineer, Detroit.
South America	Buenos Ayres	May 1, 2 P.M.	Bldg. 2 underground electric railways, etc.	Argentine Legation, Wash., D. C.

STREET IMPROVEMENTS

Bessemer, Ala.—An ordinance is before Council to pave First, Second, Third and Nineteenth streets; for further information address Mayor Rust.

Decatur, Ala.—An election will be held, March 11, to decide the question of issuing \$20,000 in bonds for improving county roads.—Wm. E. Skeggs, Probate Judge.

East Lake, Ala.—Council has decided to issue bonds for paving purposes.—Address City Clerk.

Evergreen, Ala.—Bids will be received, March 3, for the purchase of \$50,000 5 per cent, 30-year Conecuh county road bonds.—F. J. Dean, County Judge.

Washington, D. C.—Major Jay J. Morrow, Engineer Commissioner of the District, is preparing a bill to forward to Congress providing for the extension of New York avenue from the east end of the New York avenue bridge to the Bladenburg road, a distance of about one mile and a half.

Anna, Ill.—C. W. Brown, C.E., Jacksonville, is preparing plans for 25,000 square yards of brick paving, on 6-inch concrete base, with sandstone curbing, etc.

Batavia, Ill.—Engineers Anderson & Sheaf, of Elgin, will prepare a new set of plans for paving the business portion of Wilson street, Batavia; it is expected the improvement to cover that portion of Wilson street, between the Northwestern depot and a line near the east line of River street, will not exceed \$12,000.

Champaign, Ill.—Plans are under way for brick pavement on John street, about 10,000 square yards; contract will be let some time in April.—G. C. Fairclough, City Engineer.

Chicago, Ill.—Public improvements in Chicago will proceed this year upon an unusual scale. The Board of Local Improvements has just recommended the paving of streets in different parts of the city, involving a total cost of \$526,000. The streets to be improved and the cost involved are as follows: With brick—Greenwood avenue, from Seventy-fifth to Seventy-ninth street, \$31,500. With asphalt—North Kedzie avenue, from West North avenue to Palmer place, \$115,000; North Lawndale avenue, from Potomac avenue to West North avenue, \$20,000; West Seventeenth street, from Ashland avenue to South Robey street, \$33,000; Sherman avenue, from Seventy-ninth to Eighty-first street; Muskegon avenue, from Seventy-ninth street to Baltimore & Ohio Railway tracks; Escanaba avenue, from Seventy-ninth to Eighty-third street; Eightieth and Eighty-first streets, from Sherman avenue to Exchange avenue, Eighty-second and Eighty-third streets, from the Baltimore & Ohio Railway tracks to Exchange avenue; these seven streets to cost \$89,000; Hamlin avenue, from Ogden to West Twenty-sixth street, \$28,500; West Fifty-third street, from Wentworth avenue to Shields avenue, \$14,000; Fletcher street, from Sheffield avenue to North Clark street, \$11,000; Coblenz street, from North Robey street to North Western avenue, \$31,500. With macadam—Ingleside avenue, Ellis avenue and Dobson avenue, between Seventy-fifth and Seventy-ninth streets, Seventy-sixth and Seventy-ninth streets, between Cottage Grove and Greenwood avenues, \$119,000; West Fiftyth street, from Ashland avenue to Robey street, \$15,500; West Fifty-third street, from Robey street to Ashland avenue, \$16,000.

Peoria, Ill.—The Board of Local Improvements is considering estimates on the paving on Flora avenue, from Main to Chambers avenue, which a majority of the property owners favor; ordinances for the paving of Glendale avenue, from Main to Monson, and Faraday street, from Adams to Starr, are being prepared; final estimates for levee sewer extensions will also be made ready for Council.

Quincy, Ill.—The city contemplates paving with brick Broadway, from Tenth to Oak street, on 5-inch concrete base, with sandstone curb; Kentucky street, from Fifth to Eighteenth street.—John A. Berlin, City Clerk; F. L. Hancock, City Engineer.

Springfield, Ill.—City Engineer F. H. Hamilton is preparing plans for paving East Capitol avenue, from Eleventh street to East Grand avenue; there will be 12,000 square yards of brick paving, on 6-inch concrete base, with 6,450 feet sandstone curbing and asphalt filler; cost, \$26,500; he is also preparing plans for paving Cook street, from Eleventh street to East Grand avenue; there will be 11,700 square yards brick paving, on 6-inch concrete base, with 6,570 lineal feet sandstone curbing and asphalt filler; cost, \$26,153.—R. R. Reece, President, Board of Local Improvements.

Monticello, Ind.—Bids will be received, February 24, for \$4,800 4½ per cent. Jackson township road bonds.—J. L. Ackerman, County Auditor.

Terre Haute, Ind.—Resolutions for the paving of Ohio street with brick, from Tenth and One-half street to Nineteenth street,

have been passed by the Board of Public Works; this is the first street of any importance to be taken up this year; extensive improvements are to be made, and the street when finished will be the finest in the city. It is intended to reserve a portion of the thoroughfare for the purpose of a boulevard; trees will be planted and every improvement possible carried out, with a view to making the street one of the most attractive in Terre Haute.

Argentine, Kan.—The city is to pave its streets; several months ago Council passed an ordinance providing for the paving of the principal streets; a number of citizens applied for an injunction to stop the work, but Judge William G. Holt, of the Common Pleas Court, refused to grant the injunction, and as soon as the weather becomes warmer the paving will be laid and the Metropolitan street railway will lay new rails on all its car lines, according to Mayor C. W. Green. There are two miles of streets to be paved, which will give the city a thoroughfare leading from the rock road on the west, beginning at Eleventh street and Strong avenue, through the business part of town to the Twelfth street bridge; the streets to be paved are: Strong avenue, from Eleventh street to Spear avenue; Spear avenue, from Strong avenue to Metropolitan avenue; Metropolitan avenue, from Spear avenue to First street; First street, from Metropolitan avenue to Ruby avenue; Ruby avenue, from First street to Myrtle avenue, and thence to the south end of the Twelfth street bridge.

Atchison, Kan.—Fred Giddings, City Engineer, is preparing plans for six blocks of brick paving on Carney street and four blocks on S street.—Chas. T. Hawk, City Clerk.

Fort Leavenworth, Kan.—Expert road builders in the Agricultural Department, Washington, D. C., have made an estimate of the cost of the construction of a military road from Leavenworth to Fort Riley; they say if the Government furnishes all the material and does the work with free labor the road will cost about \$724,000; if the farmers furnish the rock and the work is done by convicts the cost will aggregate about \$259,000.

Kansas City, Kan.—As the result of a reduction obtained in the price of macadamizing county roads, the Wyandotte County Commissioners expect next year to be able to macadamize ten miles of road, instead of five; the contract for the last three miles of macadamizing planned by the Board for 1907 was awarded to John Mahoney for 45 cents a square yard; this is the lowest bid the Board has obtained; heretofore the price has been about 72 cents a square yard.

Topeka, Kan.—Paving of the following streets has been recommended by the Street Committee: West Sixth avenue, from Harrison to West streets, eleven blocks; Tenth avenue, from Jackson to Harrison streets, two blocks; Lane street, Sixth avenue to Eighth avenue, two blocks; Garfield avenue, Thirteenth to Fifteenth streets, two blocks; Monroe street, Tenth to Twelfth avenues, two blocks; Jackson street, Morse to St. John streets, two blocks; Thirteenth street, Huntington to Euclid avenues, one block; Harrison street, Huntington to Euclid avenues, one block; Williams avenue, from Clay to Buchanan streets, one-half block.

Louisville, Ky.—The Board of Public Works, after several consultations with Chief Engineer J. P. Claybrook and his assistants, has mapped out the work which is to be done this spring in the way of reconstruction, repairs and original work. The estimated cost of the reconstruction is about \$150,000, and the same estimate is made on the repairs and original construction. The latter work is to be done at the expense of the property owners bordering along the line of the proposed improvements. Following is the work so far mapped out, but it is subject to revision:

Reconstruction: Eighteenth, Gallagher to Magnolia; sides granite, between tracks macadam; Payne, Hamilton to Spring, granite; Payne, workhouse property line to Hamilton, asphalt; Fulton, Jackson to Campbell, granite; Clay, Main to Louisville and Nashville Railroad, granite; Oak, Brook to Preston, asphalt; Broadway, Eighteenth to Twenty-second, asphalt; Broadway, Twenty-sixth to Twenty-eighth, asphalt; Portland, Seventeenth to Twenty-third, asphalt; Brook, Broadway to Breckinridge, asphalt; Washington, First to Brook, granite; Brook, Main to Washington, granite; Breeden, Washington to railroad, granite; Marshall, Clay to Shelby, brick; alley between Market and Jefferson and Clay and Shelby, brick.

Repairs: Third, Broadway to St. Catherine, asphalt; Shelby, Jacob to Camp; Shelby, end of pavement to city limits, macadam; Campbell, Main to Louisville and Nashville Railroad, macadam; Center, Jefferson to Green, asphalt; Longest, Everett to Willow, asphalt; St. James Court, gravel; Spring, Payne to Mellwood, macadam; Portland, Fifteenth to Seventeenth, asphalt; Park, Fourth to Sixth, macadam; Fifteenth, asphalt.

Original Construction: Burnett, Floyd to Preston; Seventeenth, Maple to Arbogast; Seventeenth, Gallagher to Oak, brick; Payne, workhouse line to Pine, asphalt; Lexington, Thirteenth to Fifteenth, brick; Goss, Texas to city limits, brick; O'Hara, Fifteenth to Eighteenth, brick; alleys between Lucia, Beechwood, Van Buren and Baxter, brick.

Lynn, Mass.—A plan is being considered for building a three-mile strip of State highway through the town of Revere to connect the Point of Pines and Beachmont and complete the highway from East Boston to the New Hampshire State line.

Grand Rapids, Mich.—The limit for the street improvement this year will be \$300,000; included among the largest contracts which have been or will be let by the Board of Public Works are the following: South Division street, \$96,527; East Bridge street, \$66,744; Eleventh street, \$11,050; Shaumut avenue, \$17,200; South Ionia, \$19,909; Commerce street, \$26,632; East Leonard, \$11,774; Hilton street, \$17,609; West Leonard, \$26,632; Neland avenue, \$5,055; Buchanan street, \$5,000; Morris street, \$9,000.

Billings, Mont.—All bids have been rejected for paving, received February 4; new bids will probably be called for some time in April; the work consists of 86,603 yards gravel, 6,305 shale brick pavement, 5,000 feet of sewer, 17,400 feet of gutter.—O. Matheson, City Engineer.

Greenwood, Miss.—McDonald, McCoy & Co. have been awarded, at par, the \$100,000 5 per cent., 25-year Leflore county road and bridge bonds.

Joplin, Mo.—Ordinances have been passed to pave a number of alleys, also the roadways of High, Park, Seventh, Club, High and Terrace streets, Broadway and Cummings avenue, with macadam.—J. F. Osborne, Mayor.

Moberly, Mo.—The city contemplates about twenty blocks of single-course brick paving, on 4-inch sand cushion, with burnt brick curbing.—J. F. Curry, City Clerk; Swan McDonald, City Engineer.

Lincoln, Neb.—The City Engineer has been ordered to prepare estimates on the cost of paving District 82.

Glen Rock, N. J.—Proposals will be received on \$35,000 5 per cent. road improvement bonds, until March 10.—J. B. Christopher, Borough Clerk.

Rochester, N. Y.—Secretary Pifer, of the Board of Contract and Supply, has been directed to advertise for bids for Driving Park tract sewer, walks and grading, and for South avenue cement walks.

Akron, O.—Council has voted in favor of paving Forge and West Thornton streets; also for paving Mayfield avenue.

Ashtabula, O.—Council has voted to grade and drain Atlantic street, from Lake street to Ohio avenue; also to grade and drain Pacific street, from the angle to Harbor avenue, a distance of about 800 feet; also to change the plans for the paving of Maple street to provide that the material shall be vitrified brick, instead of asphalt block.—F. W. Wagner, Clerk of Council.

Canton, O.—The City Engineer is planning to widen North McKinley avenue and to improve, by paving and sewerage, several other streets.

Cincinnati, O.—The Chief Engineer of the Board of Public Service states that twenty-one asphalt streets are to be resurfaced in the spring; the paving and sewerage of Fourth avenue and one or two other streets is to be started as soon as the weather will permit.

Cleveland, O.—The Commissioners have been asked to pave five miles of Columbia street, in Olmsted township.

City Engineer Hoffman will soon commence work on the plans and estimates for the Superior viaduct, as reconstructed, with a fixed span 93 feet above river; the annual report of Assistant Engineer Richards points out that a new clearance allowed for the Superior and Central viaducts simplifies the bridge situation; in reviewing the work of the past year Mr. Richards states that the new Jefferson avenue bridge and the Eagle avenue bridge will be completed about May 1.

Dayton, O.—For street repairs, the city's share will be \$27,571.50, while the share to be paid by the street car companies will be \$5,629.60, the total cost being \$33,201.10. For the repair of asphalt streets, the city will furnish material amounting to 13,710 square yards, the street car companies 87. In brick the city's share will be 4,106 square yards, while the car companies will be 1,464. To resurface Brown street, the city will furnish 3,700 square yards of material, and the car companies 1,700, while on Washington street it will require 2,014 square yards from the city and 850 from the car companies. It will require 25 square yards of material to fix up the stone streets. In repairing the alleys the city will have to buy 844 square yards of asphalt and 181 yards of brick.

Marietta, O.—Engineer E. F. Gates has completed estimates for the cost of paving Fifth street, which will be about \$30,000; Council will also order estimates on the cost of paving Warren street and Sacra Via., as well as East Green street.

Martins Ferry, O.—Council has decided on the paving of about one dozen streets early in the spring; the Solicitor is now preparing the preliminary legislation for this improvement.

Portsmouth, O.—Council will proceed at once with preliminary legislation for the paving of West Front street.

Sandusky, O.—The Council Committee has recommended the paving of Decatur street.

Toledo, O.—Street work for which ordinances have been passed follows: Paving—Batavia street, Fulton to Franklin, 3,530 yards, \$9,707.50; Chase street, Chicago to Troy, 11,230 yards, \$38,919.50; Emerald avenue, Broadway to Clover Leaf Railroad, 7,530 yards, \$25,925.50; Scott street, Twelfth to Canton, 1,560 yards, \$5,312.50; alley between St. Clair and Superior, 685, \$2,476.25; Walnut street, Page to Delaware, 4,610 yards, \$16,028.50; Harrison street, Emerald to Mill, 4,315 yards, \$14,672; Huron street, Lafayette to Short, 2,080 yards, \$6,842; Orange street, Huron to Superior, 1,390 yards, \$4,515.35; Vance street, Erie to Fifteenth, 3,740 yards, \$13,596.50; Galena street, Ontario to Michigan, 850 yards, \$3,312. Repaving—Fulton street, Ashland to Kenilworth, 14,950 yards, \$44,700; totals, 56,470 yards, \$186,951.60.

Street work for which resolutions have been passed or are pending: Grading—Alley N. W. of Detroit, \$385.65; Ayres avenue, Delaware to Clifton, \$1,169; Blaine avenue, Delaware to Clifton, \$1,491; Clifton street, Ayres to Blaine, \$636.10. Paving—Putnam street, Adams to Machen, 10,800 yards, \$33,598; Hicks street, Forest to Clinton, 10,300 yards, \$36,544.50; White street, Starr to Navarre, 7,300 yards, \$25,271; alley east of Collingwood, 264 yards, \$885.50; alley between Franklin and Vermont, 1,025 yards, \$3,708.05; totals, 29,689 yards, cost, \$103,788.50.

Altoona, Pa.—Mayor Walker has approved eleven ordinances providing for the paving, with brick, of these sections of streets: First avenue, between Sixteenth and Nineteenth streets; Seventeenth street, between First and Eighth avenues, Second avenue, between Sixteenth and Eighteenth streets; Ninth street, between Twentieth and Twenty-first avenues; Nineteenth avenue, between Twelfth and Thirteenth streets; First avenue, between Fifteenth and Sixteenth streets; Third avenue, between Fifteenth and Sixteenth streets; Thirteenth alley, between Eleventh and Twelfth streets; Third avenue, between Seventh and Eighth streets; Sixth alley, between Eighth and Ninth streets; Sixth avenue, between Seventh and Eighth streets.

Scranton, Pa.—Three miles of pavement will probably be laid in various parts of the city in the spring; this, added to the present total of paved streets, would bring the total up to about thirty miles. Ordinances are now being prepared providing for the paving of Webster, Clay and Quincy avenues, from the end of the present paves on these streets to the city line; while the bulk of the expense of the improvements would, of course, be paid by the abutting property owners, the city will be called upon to bear its share in accordance with a recent decision of court; the decision was to the effect that in the future the city shall pay for the paving of street intersections.

Dallas, Tex.—Paved with brick from Jackson to Corinth, and with all telephone wires underground. Akard street promises to be one of the most popular thoroughfares of the city; contracts have already been let for storm water sewers and conduits; the putting of all wires underground by the telephone company will do away with the unsightly poles; it is estimated that this work will cost the Akard street property owners and the city the sum of \$75,000; the work of construction will begin as soon as possible. Griffin street, between Elm and Pacific avenue, is being graded preparatory to paving with a new bituminous material; this will be a test of this material, and should it prove satisfactory it will be used on other streets in the city.

Palestine, Tex.—Proposals will be received until March 20 for \$50,000 4 per cent. paving bonds.—J. R. Hearne, Mayor.

North Yakima, Wash.—Council has passed a resolution directing the City Engineer to prepare estimates on the cost of paving Yakima avenue with brick.

Green Bay, Wis.—W. W. Reed, City Engineer, is preparing plans for asphalt paving on East Main street; bids will be asked in March.

Marietta, Wis.—A. L. Hills, City Engineer, is preparing plans, and bids will be asked in about six weeks, for brick paving on Main street and Pierce avenue.

SEWERAGE

East Lake, Ala.—Favorable action was taken by Council with reference to issuance of bonds for construction of sewers.—Lucien D. Lee, City Engineer.

Lowell, Ariz.—Residents of Upper Lowell and Jiggerville have decided to build sewers to connect with the Bisbee sewer; estimated cost, \$14,000.

Phoenix, Ariz.—Election may be held to vote on offer of Phoenix Sewer Company to sell its plant to city for \$82,000.

Trinidad, Col.—F. O. Rays, Pueblo, is preparing plans for a sewerage system, estimated to cost about \$35,000.

Washington, D. C.—The Commissioners have ordered that a trunk sewer be constructed from the intersection of Loughboro road and Arizona avenue through the right of way recently acquired through parcel 34-35 to Fortieth street; and that the following service sewers be constructed: In Fortieth street, Northwest, between parcels 34-35, and Yuma street; in Wisconsin avenue, Northwest, between Yuma street and River road; in Wisconsin avenue, Northwest, between Warren street and Loughboro road; in Warren street, Northwest, between Fortieth street and Wisconsin avenue; in Crescent place, Northwest, between Sixteenth and Seventeenth streets; in Seventeenth street, Northwest, between Crescent place and Kalorama road.

Blue Ridge, Ga.—The city, on March 2, will sell \$30,000 of bonds, proceeds to be used for installing sewerage, water works and electric light plant.—W. C. Bolling, Mayor.

Anna, Ill.—C. W. Brown, C.E., Jacksonville, is preparing plans for a 6 to 10-inch tile sanitary sewer, to cost \$16,000.

Carrollton, Ill.—Plans are being prepared to install a sewer system, estimated to cost \$25,000.

Springfield, Ill.—City Engineer F. H. Hamilton has completed plans for a sewer on Ninth street; there will be required 1,520 feet of 18-inch tile, 800 feet of 12-inch inlet pipe and four manholes; bids will be received about March 1.—R. R. Reece, President, Board of Local Improvements.

Virden, Ill.—Installation of sewer system, to cost \$28,000, is under consideration.

Brazil, Ind.—Council is considering the proposition of putting in a storm sewer of brick in Pogue's Run, a stream which runs through the city; the proposed sewer is to be one and a quarter miles in length, and the cost is approximated at \$35,000; it is thought that the proposition will carry.

Evansville, Ind.—The Board of Public Works has ordered construction of main sewer along Second avenue.

Fort Wayne, Ind.—A sewer 3,900 feet long will be built, to drain all that territory northwest of Forest Park, at a cost of \$20,000.

Vincennes, Ind.—The Board of Public Works is reported to be considering offer of Indiana Sewerage and Drainage Company to sell its Church street sewer to city for \$18,000.

Laurel, Md.—The city contemplates issuing \$15,000 5 per cent. bonds for the construction of sewer system.

Ashfield, Mass.—The State Board of Health has recommended a sewer system for the village.—John M. Sears, Town Clerk.

Detroit, Mich.—The Public Works Department has asked for \$380,920 for sewer work for this year; this estimate includes \$100,000 for constructing sewer in the Eighteenth Ward.

Council has directed the Department of Public Works to advertise for proposals for construction of two vitrified crock lateral sewers.

The Committee on Sewers has rejected all proposals for iron castings for a year's supply, and has directed the Department of Public Works to readvertise for proposals for same.—J. J. Haarer, Commissioner of Public Works.

Flint, Mich.—Council has directed the City Engineer to prepare plans and specifications for four new sewers to be built in the spring.—Address City Clerk.

Pontiac, Mich.—Ordinance has been passed to issue \$10,000 of bonds for constructing trunk sewer.

Duluth, Minn.—City Engineer T. F. McGilvray is preparing plans for sewers in sundry streets; estimated cost, \$16,000.

Moberly, Mo.—City Engineer Swan McDonald is preparing plans for a 12 to 30-inch sanitary vitrified pipe sewer, about 4 miles long; cost \$10,000.—J. F. Curry, City Clerk.

Two Rivers, Minn.—The Minnesota Engineering Company, Providence Building, Duluth, is preparing plans for sewers for the city; estimated cost, \$25,000.—P. J. McAlpine, City Clerk.

Columbia, Miss.—Preliminary plans, etc., are being made for a system of sewers for this place.

Scranton, Miss.—Council has authorized an

issuance of \$20,000 of bonds for sewer construction and street improvements.

Joplin, Mo.—Plans and specifications have been completed for a sanitary sewer system, by City Engineer Hodgdon.

St. Joseph, Mo.—David Lawlor, City Engineer, has made estimates of the cost of extending the main sewers to the city limits; cost will be about \$478,000.

St. Louis, Mo.—Oellien Real Estate and Investment Company is to construct sewer for its property in Maplewood.

Holdridge, Neb.—Bonds have been voted for constructing a sewerage system, and work will be started in the spring.

Charlotte, N. C.—A report on condition of local septic tanks states that \$6,000 would be needed to put them in good condition.

Ballston Spa, N. Y.—An election will be held to decide the question of issuing \$10,000 sewage disposal bonds.—Address City Clerk.

Rochester, N. Y.—Ordinances have been passed providing for the construction of sewers in Gillette and Bay streets.

Seneca Falls, N. Y.—Council has authorized an issue of \$49,000 bonds for sewer purposes; bids will be received February 25.—Address City Clerk.

Ashtabula, O.—Council has decided to authorize the construction of a sewer to have an outlet across private property from Cherry to High street.—F. W. Wagner, Clerk of Council.

Carthage, O.—Engineer A. Cowen has submitted plans for the construction of a sewer system, estimated to cost \$100,000.

College Hill (Cincinnati Post-office), O.—The citizens have voted \$45,000 bonds for the construction of a sewerage system.

Dayton, O.—City may take up matter of building sewage disposal plant.—Dr. J. Morton Howell, President, Board of Health.

Fostoria, O.—Council has decided to construct a sewer in District No. 3.

Salem, O.—The city has purchased 24-acre tract of land for the purpose of erecting a sewage disposal plant.

Toledo, O.—Resolutions have been adopted and are pending for the construction of sewers, to cost \$19,798; ordinances for additional construction involving the expenditure of \$5,737 have been passed and are pending; the following work is part of what will be done in building sewers during the year: Lake Shore avenue, No. 1020, 1,447 feet, \$1,071.25; Fredonia, No. 1026, 715 feet, \$1,722.72; Bancroft sewer, No. 1027, 3,990 feet, \$7,315.25; Oakwood sewer, No. 1028, 687 feet, \$1,187.20; Fernwood avenue sewer, No. 1029, 685 feet, \$1,184; Fernwood and Hicks street sewer, No. 1030, 673 feet, \$1,164.80; Monroe street sewer, No. 1031, 850 feet, \$1,499; Hastings avenue sewer, No. 1033, 1,735 feet, \$2,531.75; Nasby street sewer, No. 1034, 1,535 feet, \$2,119.50; totals, 10,870 feet, \$19,798.47.

Warren, O.—E. M. Milligan, Chief Engineer, is preparing plans for the West Side sanitary sewer system; this work is to be inaugurated early in the spring.

Beaver, Pa.—A sewage disposal plant, owned and operated by the borough in connection with the proposed new system, is one of the possibilities of the borough of Monaca. Councilman Charles Wagner has suggested that such a proposition be considered, now that the State Board of Health has granted a permit to build a sewer system in the borough. The matter will be discussed fully Council.—James P. Leaf, Borough Engineer.

Ellwood City, Pa.—R. Winthrop Pratt, Columbus, O., will prepare plans for sewage purification for Ellwood City.

Erie, Pa.—Officials and residents of Erie are discussing plans for removing sewage from Mill Creek, and the matter is to be brought to the attention of the State Board of Health.

Greenville, Pa.—The State Health Department will probably order this place to construct sewage disposal plant, at a cost of about \$40,000.

Meadville, Pa.—As a result of a visit of Capt. J. M. Clark, Sanitary Inspector for the State Board of Health, the city will have to build a sewage disposal plant, being given until May 1 to present some definite plan to Dr. Samuel G. Dixon, State Commissioner.—B. F. Miller, Jr., City Engineer.

Titusville, Pa.—Council will probably recommend a \$40,000 appropriation for the construction of a sewage disposal plant.

Chattanooga, Tenn.—Council has passed, over the veto of Mayor W. R. Crabtree, with but one dissenting vote, the ordinance for the construction of the Chestnut street sewer, at a cost of \$30,000 to \$35,000.—Robert Hooke, City Engineer.

Knoxville, Tenn.—Park City, a suburb, will vote on bond issue for sewer construction.

Derby, Tex.—Council has under consideration an issue of \$80,000 drainage bonds.—Address City Clerk.

El Paso, Tex.—Council is considering issue of bonds for new sewerage system.—Address Mayor Sweeney.

Hereford, Tex.—Council has directed plans to be made for complete sewer system; an election will be called to vote on the question of issuing sewer bonds.—Address City Clerk.

Moundsville, W. Va.—The citizens will soon vote on the proposition of issuing \$15,000 bonds, the money to be used in paying off the city debt and sewerage the city, and they may also build City Hall.—Address Mayor Williamson.

WATER SUPPLY

Birmingham, Ala.—The city proposes to issue \$3,000,000 bonds for water works.—B. H. Devine, City Clerk.

Ensley, Ala.—Plans for reservoir to be erected for the United States Steel Corporation have been completed and submitted to the New York office; dam will be constructed and pumping station installed.

Henleyville, Cal.—J. M. Howell has organized the North Side Irrigation Co. and is having surveys made for an irrigation canal; it is proposed to build two reservoirs and to construct a 15-mile canal.

Grand Junction, Col.—Council has sold bonds to the amount of \$30,000 to improve present water supply of city; 12 and 14-inch steel pipe will probably be used.—J. R. Wentworth, Mayor; John M. Conley, City Clerk; J. F. O'Malley, City Engineer.

Florida, Fla.—Council proposes to establish water system, at a cost of \$20,000.

Savannah, Ga.—Council has authorized improvements at the municipal water works system at a cost not to exceed \$50,000; plans are to be prepared immediately and material purchased.—H. S. J. Landon, Engineer-in-Charge.

Aurora, Ill.—Extensions of city water mains are contemplated.

Elgin, Ill.—It is planned to expend about \$10,000 on extensions and machinery for city water plant the coming spring.

Salem, Ill.—The authorities are arranging to put in a system of water works.—Address City Clerk.

Cedar Rapids, Ia.—The city will purchase 30,000 feet of water main for extending water system.—C. J. Fox, Superintendent of City Water Works.

Muscatoine, Ia.—Council is preparing to extend water mains in certain streets.—Address City Clerk.

Newton, Ia.—The \$40,000 issue of city water works bonds were placed with Otis & Hough, of Cleveland; this firm agreed to give a bonus of \$550 and take the issue at 5 per cent.

Evansville, Ind.—City Council has decided to have a filtration plant constructed.

Logansport, Ind.—The city will connect dead ends of water mains at a cost of \$3,100.

Beloit, Kan.—An ordinance directing the Mayor and City Clerk to issue and negotiate bonds of the city for the purpose of extending the water works plant has passed Council.

Maysville, Ky.—The Maysville Water Company has increased its capital stock from \$100,000 to \$200,000.

Grand Rapids, Mich.—The Board of Public Works will soon advertise for water pipe, fittings and hydrants.

Duluth, Minn.—The City Engineer has surveys under way for extending city water system to the County Poor Farm.

East Grand Forks, Minn.—City Council has passed an ordinance for issuing \$50,000 bonds for establishing a water works system.

Columbia, Miss.—Preliminary plans, etc., are being made for a system of water works and sewers, to cost \$50,000.—W. L. Simmons, Town Clerk; K. A. Cramer, Magnolia, Consulting Engineer.

Moberly, Mo.—Consulting Engineer Richard H. Phillips, Security Building, St. Louis, is preparing plans for a water works system to cost \$100,000; bids will be received about April 1 by J. F. Curry, City Clerk.

German Valley, N. J.—German Valley Water Company, capital stock, \$10,000, has been incorporated; Edwin J. Neighbor is interested.

Harrison, N. J.—The New Jersey Suburban Water Company has been granted permission by Council to connect a water pipe with a 36-in. main at Fourth street, to supply the Clark Thread Company, East Newark, N. J., with water.

Mendham, N. J.—The State Water Supply Commission has approved plans for the construction of a municipal water system by the borough.

Sea Isle City, N. J.—The Sea Isle Water Company may have a cement cistern constructed for the purpose of aerating the water pumped from the wells.

Verona, N. J.—The City has voted to issue \$55,000 of water works bonds.

Buffalo, N. Y.—Col. F. G. Ward, Commissioner of Public Works, recommends two issues of \$500,000; one for continuing the work of the Inlet tunnel and the second for the purpose of extending water mains.—Address City Comptroller.

Syracuse, N. Y.—Steps are being taken so that contract can be let in the spring for

the construction of the second conduit line from the water storage reservoir at Skaneateles Lake; it is the purpose to increase the water supply of the city, and the total estimated cost, including reservoir in which to store the flow of the second conduit, will be \$1,250,000; surveys and plans have been made.—Henry C. Allen, City Engineer.

Rochester, N. Y.—The Board of Contract and Supply invites bids for two factory mutual meters for the Water Works Department.—Address Secretary Piper.

Towner, N. D.—The city will vote on the question of issuing \$10,000 bonds for water works.

Cincinnati, O.—An ordinance is before Council authorizing an issue of \$200,000 bonds for making betterments in the distribution service of the water works.

The Board of Directors of the Hamilton County Infirmary has decided to do away with the present water works of the institution and establish a new one of an improved model; the old wells, which have stood since the establishment of the institution, are in the rear of the buildings near the stables; these will be filled and new ones drilled in the engine house, where the water and steam may be more easily pumped to the various parts of the institution.—Address Superintendent Butterfield.

Cleveland, O.—The Board of Public Service may ask \$1,000,000 bond issue for laying another intake.—A. R. Callow, Secretary.

Columbus, O.—The Fire Chief recommends the issue of \$75,000 for extending water mains.—W. C. Holliday, Superintendent of Water Works.

Martins Ferry, O.—The Board of Public Service has recommended the construction of the water works plant and will engage the services of an expert engineer to make preliminary plans for this enterprise; E. J. Millar, of Wheeling, W. Va., and G. L. McKibbin, have both been mentioned in connection with this work.

Newark, O.—Mayor Herbert Atherton has signed the \$85,000 bond ordinance for completing the municipal water plant upon which the sum of \$300,000 has been expended; it is estimated that it will require about three more \$85,000 appropriations to complete the system.—Riggs & Sherman, Toledo, Engineers.

Norwood, O.—An ordinance providing \$7,000 for the extension of water mains has been authorized by Council.

Oxford, O.—Bids will be received March 10, noon, for \$4,500 4½ per cent., semi-annual bonds for constructing extensions to the water works system.—D. P. Beaton, Village Clerk.

Rockport, O.—Bids will be received March 2 for the purchase of \$13,000 4 per cent. 20-year water extension bonds.—Fred Fletcher, Village Clerk.

Toledo, O.—On the filter plant, the estimated cost of which is \$832,000, work has been in progress for several months and more labor will be employed as weather conditions become more favorable for the execution of the work. The first amount available for the plant is \$565,000; a bond issue of \$230,000 was authorized by the Council a few days ago; in the purchase of real estate \$37,000 already has been expended; the system will be built entirely of concrete and will extend from the plant on River road to the water works pumping station on Broadway; work on the conduits, it is expected, will begin in a few weeks.

Troy, O.—Council has passed an ordinance to issue \$2,000 bonds for water works extensions.

Warren, O.—Riggs & Sherman, Toledo, have been engaged to submit estimates of the cost of constructing a municipal water works system.

Hugo, Okla.—The city has voted \$150,000 water works bonds.

Pittsburg, Pa.—As a result of the visit of the special investigating committee of Councils to Aspinwall, a bond issue of about \$600,000 will probably be authorized for the construction of ten additional filter beds.

Reading, Pa.—Surveys have been made and plans are being prepared for filtration beds.—Elmer H. Beard, City Engineer.

Roslyn, Wash.—A gravity water system will be constructed by the city, the present system being inadequate; estimated cost, from \$60,000 to \$70,000.

Seattle, Wash.—Amendment to the charter providing for the extension of the Cedar River water system and issue of bonds to the amount of \$2,250,000 have been approved by Council.

Kewaunee, Wis.—Plans and specifications are wanted for a system of water works.—Thos. F. Konop, Secretary of Committee.

Havana, Cuba.—It is reported that orders will soon be placed for 4,000 tons of 42-inch pipe for Cuban points.

Winnipeg, Man., Can.—Competitive plans are asked by the Public Parks Board for an 80 x 120 ft. pavilion with 60-ft. tower capable of sustaining the weight of a 16,500-gallon water tank.—G. Blackwood, Secretary.

LIGHTING AND ELECTRICITY

Dadeville, Ala.—The city has received no bids for the purchase of \$8,500 5 per cent. electric light bonds.—J. B. Ryance, Mayor.

Gadsden, Ala.—The Tri-City Gas Company has authorized an issue of \$200,000 bonds; \$100,000 is to be issued at once and the remainder is to be issued as it is needed for construction, enlargements and betterments.—Address Secretary.

Hemet, Cal.—The Improvement Association is considering plans for lighting the town by gas or electricity.—Address Town Clerk.

San Francisco, Cal.—The Pacific Gas & Electric Company will spend \$3,000,000 of the new bond issue on improvements.—John A. Britton, General Manager.

Jesup, Ga.—A company has been formed here with a capital of \$300,000 for the purpose of developing water power and generating electricity for manufacturing purposes; this company will be known as the Goose Creek Railway & Power Manufacturing Company and they will build and operate an electric line from Jesup to several other towns; N. W. Whaley and G. Zeigler are the promoters.

Indianapolis, Ind.—The State Board of Agriculture is considering the establishment of an independent electric light plant on the State Fair grounds.

Norton, Ia.—Council has under consideration the issue of \$20,000 bonds for building an electric light plant.—Address City Clerk.

Indianapolis, Ind.—The directors of the Citizens' Gas Company intend constructing a gas plant and are considering various sites for the purpose; it is the intention to begin work early in the spring.—B. J. T. Joup, Indiana Trust Building, Engineer-in-Charge.

Vermillion, Ind.—The Terre Haute, Indianapolis & Eastern Traction Company has secured a contract to light the town; G. F. Grover, Manager, announces that improvements will be made on the local lines in Terre Haute this year, the cost of which is estimated at \$75,000.

Iola, Kan.—The Department of Public Utilities is contemplating extending the lighting circuits of the municipal electric light plant to the residence portion of the city.—N. E. Stone, Chief Electrician.

Topeka, Kan.—An election will be held April 7 to vote on the issue of \$50,000 bonds for extending the electric light plant.—Address City Clerk.

Boonsboro, Md.—The Burgess and Council have under consideration the question of lighting the town by electricity; John C. Livers, Lancaster, Pa., who proposes furnishing the power from Dam No. 4, was before the Board and offered to furnish 26 arc lights for \$500 a year; if the contract is given to Mr. Livers he will install the plant and also furnish power for commercial purposes.

Sharpsburg, Md.—The Burgess and Council have awarded the contract to furnish 55 arc electric lights for the town to John C. Livers, who will install the plant as soon as possible; it is expected to have the system in operation by August 1; the power will be furnished through the Shepherdstown plant, which was purchased some time ago by Mr. Livers; power will also be furnished for commercial lighting; the plant will be operated on the meter system and the street lights will be burned on dark nights; the switch board will be located in the Burgess' office.

Grand Rapids, Mich.—Guy W. Rouse and W. H. Gay can be addressed in regard to improvements that are going to be made by the Chattanooga Gas Company which will cost \$150,000. The streets will be illuminated by gas for the next three years, in all probability.

Midland, Mich.—Water power is to be developed this season on the Chippewa River near this town; H. von Schon, Consulting Engineer, of Detroit, is preparing the plans and specifications; a transmission line of about 25 miles will be required.

Maysville, Mo.—A proposition to issue \$10,000 bonds for electric light plant was defeated at a recent election.

Blair, Neb.—Mr. Capps, of the Blair Electric Light & Power Company, will install considerable new machinery in the electric plant.

Bath, N. Y.—The Citizens' Electric Service Company proposes to construct an electric light plant to supply electricity in Bath, Kenora and Avoca; it is estimated to cost \$75,000.—E. J. G. Tower, President.

Elmira, N. Y.—The contract with the Elmira Water, Light & Railroad Company for the several incandescent lights that are used expires on March 1, at which time a 5-year period will terminate; this contract, which is a comparatively small one, may probably be renewed at the same terms that are now in operation, though some inquiry may develop as to whether a cheaper rate cannot be obtained; the present price is 5.5 cents per kilowatt for electricity used and the total for the year comes to \$6,900; the city's contract

for arc lights expired February 28 last and was renewed at that time for five years at the old figures, though at that time former Mayor Brockway and some of the Aldermen were disposed to take up the matter more in detail with the utilities company.

Bellville, O.—E. G. Garber will rebuild electric light plant recently destroyed by fire.

Cuyahoga Falls, O.—The Falls Rivet & Machine Company has been granted a franchise by Council and probably will erect a power plant.—Edwin Seedhouse, President.

Delaware, O.—Mr. Miller, of Richwood, is forming a company for the construction of an electric lighting plant in the Village of Ostrander.

Youngstown, O.—The Council has authorized the Board of Public Service to proceed with plans for a municipal lighting station to furnish 1,000 lights; Councilman Davis can give information.

Nashville, Tenn.—B. J. Hodge, Building Inspector, will prepare plans for a brick addition to the power house of the municipal electric light plant.

Clarksville, Tex.—The Texas Union Traction Company has incorporated to construct electric system in North Texas.—C. P. Moore and J. T. Upchurch, Directors.

Corpus Christi, Tex.—C. H. Patterson, Kansas City, Mo., is going to establish a gas plant that will cost about \$75,000.

Ogden, Utah.—The plans for the erection of a large plant at Devil's Gate, in Weber canyon, have been completed and the officials of the Utah Light and Railway Company announce that work will be begun in the spring; the plant will cost \$350,000 and will be built by the Utah Light and Railway Company, which is a part of the Harriman system; power lines will be run from the plant to Ogden and on to Salt Lake City, where the power will be used to operate the street car system; electric power will be furnished to the machine shops, roundhouses and other departments of the system in this city.

Lynchburg, Va.—The Lynchburg Traction and Light Company is contemplating making additions to the equipment of its plant and will install a 1,500-kilowatt turbine, 900-horsepower boiler and one 750-kilowatt rotary converter.—R. D. Apperson, Manager.

Tacoma, Wash.—Stone & Webster propose to develop an immense electric power system at Lake Tapps and the White River; a system to cost \$10,000,000 is proposed; an extensive electric interurban system is connected with the plan; the Pacific Coast Power Company will be the title of the company.

Eau Claire, Wis.—The city asked for bids for either gas or electric lighting for five or ten years, to be submitted Jan. 15, but bids were returned unopened and the Committee on Lighting was directed to change the specifications.—Wm. Danforth, City Engineer.

Iola, Wis.—E. R. Gusman is interested in establishing an electric light and power plant in this place.

City of Mexico, Mexico.—C. H. Brooks, Vice President of the Santo Domingo Mining Company, with a company of Americans and city capitalists, will in a short time erect an electric light plant at the mines of the Santo Domingo Company which will cost \$500,000.

FIRE EQUIPMENT

Ocean Park, Cal.—A proposition of issuing \$25,000 bonds for fire protection was defeated at a recent election.

Mullan, Idaho.—The Volunteer Fire Department has petitioned the Village Council for more fire hose; Fire Chief Dooling can give further information.

North Manchester, Ind.—Better fire protection will soon be established; the purchase of a hose wagon is contemplated.

New Orleans, La.—The Fire Board is interested in the purchase of new hose.—Mayor, Martin Behrman.

Minneapolis, Minn.—Council has defeated the proposition to issue \$100,000 bonds for the erection of two new fire stations.

Wheaton, Minn.—Plans are being formed for better fire protection.

Springfield, Mo.—Council is considering the advisability for purchasing an auto fire engine.—Address Fire Chief.

Belhaven, N. C.—Bids will be received March 1 for the purchase of \$10,000 5 per cent., 25-year Fire Department bonds.—G. L. Swindell, County Clerk.

McClusky, N. D.—This place is without fire protection; the establishment of a Fire Department is being considered.

Windmere, N. D.—A hook and ladder company has been organized at this place.—C. K. Thorstad.

New York, N. Y.—Fire Commissioner Hugh Bonner has recommended the purchase of 100,000 feet of fire hose.

Akron, O.—An ordinance is before Council authorizing an appropriation of \$30,000 for building fire station.—Address City Clerk.

Bryan, O.—Council has authorized the purchase of two fire extinguishers with Siamese connection.—Address Mayor Hickox.

Cincinnati, O.—The Board of Public Safety will submit to Council an ordinance to issue \$26,000 in bonds to buy fire apparatus for companies recently established at Hyde Park, Evanston and Fire Companies Nos. 27 and 19.—Address Chief Millikin.

Cleveland, O.—Council has adopted resolution providing \$2,500 for an automobile for Fire Chief Wallace.

Marion, O.—Council has adopted resolution authorizing an issue of \$15,000 bonds for Fire Department; this resolution will be voted upon April 6.

Toledo, O.—For the new fire station, which is to be located in the district bounded by Cherry street, Delaware avenue, Ten Mile Creek and Central avenue, and which is to cost \$30,000, a bond issue was authorized for the purchase of apparatus and property and for the erection of buildings.

Troy, O.—Council has passed an ordinance authorizing an issue of \$2,000 bonds for improving water system and fire hydrants.

Zanesville, O.—Fire Chief Tanner has submitted to Council estimates for new fire station, the building proper to cost about \$4,500, and a combination fire wagon and two horses about \$2,300.

Ardmore, Okla.—Chief Slotter states that the city will soon be in the market for a hook and ladder and combination hose and chemical wagon.

Altoona, Pa.—An ordinance has been approved by Mayor Walker for the purchase of a location in the Seventh Ward for a fire station.

Pittsburg, Pa.—Plans are being made for two engine houses.—Address Fire Chief.

Arlington, S. D.—The city will soon organize a fire company; for further information address Marshal.

Suring, Wis.—The people of this city are thinking of getting fire protection.

Cheyenne, Wyo.—Fire Chief Phil Kerrigan is advocating the buying of a fire steamer.

PUBLIC BUILDINGS

Pasadena, Cal.—The people will soon be asked to vote on a proposition of issuing \$150,000 bonds for school purposes.

Colorado Springs, Col.—Architect Thomas P. Barber is preparing plans for a fireproof press brick hospital building; cost, \$70,000.

Washington, D. C.—A new building for the Supreme Court of the United States, to cost \$8,000,000, and to be situated on the corner opposite the Library of Congress, where the Congressional apartment house now stands, is provided for in a bill lately introduced in Congress.—James Knox Taylor, Supervising Architect, Treasury Department.

The United States Senate has passed a bill authorizing the Commissioners of the District of Columbia to accept the gift of Andrew Carnegie to construct a branch library in Takoma Park, at a cost of \$30,000.

Plans for two proposed 16-room and one 12-room school buildings have been completed and bids will soon be invited; structures to cost about \$100,000.—Snowden Ashford, Building Inspector.

Augusta, Ga.—A new City Hall will be erected at an expense of \$150,000; it is expected that work will be started this year and that the completion will require three years.

Anna, Ill.—Proposals will soon be received by the Board of Trustees, W. L. Ethon, President, for the erection of a hospital building; press brick with stone trimmings, slate roof, nickel plumbing, hardwood finish and floors and steam heat; State Architect, W. Carby Zimmerman, Chicago.

Chicago, Ill.—An appropriation of \$1,160,000 for the erection of several school buildings has been recommended by the School Committee of Council; it also was recommended that \$405,000 be appropriated for the completion and equipment of schools now in use; the schools to be built are as follows: Erie School, Hermitage avenue and West Sixty-first street, \$150,000; Fulton School, Hermitage avenue and West Fifty-third street, \$140,000; Jefferson School, Elburn avenue and Larkin street, \$130,000; Raster School, Wood and West Seventieth streets, \$50,000; Tilton School, West Lake street and Forty-fourth avenue, \$230,000; Carl Schurz School, Forty-first court, Irving Park, \$250,000; New Trumbull School, Andersonville, \$210,000. Appropriations for equipment were made for the following schools: Bowen School, \$100,000; Dante School, \$50,000; Healy School, \$30,000; Jackson School, \$15,000; Nobel School, \$35,000; Washburn School, \$175,000.

Shawneetown, Ill.—The School Board expects to rebuild the public school building destroyed by fire last month as soon as the weather will permit.—C. P. Higginbotham, Secretary.

Springfield, Ill.—Architect Geo. H. Helmle has prepared plans for an 8-room, \$30,000 addition to school building for the Board of

Education.—J. H. Collins, Superintendent.

Terre Haute, Ind.—Architect J. G. Vrydaugh is preparing plans for the 2-story, 8-room, \$40,000 Greenwood school building for the School Board.

Proposals will be received March 17 for \$128,300 4½ per cent. jail and Sheriff residence bonds.—Nathan G. Wallace, County Auditor.

Des Moines, Ia.—Plans are being prepared by Proudfoot & Bird, Crocker Building, for a 4-story City Hall; cost, \$350,000.

Atchison, Kan.—Architects Saylor & Seddon, Kansas City, are preparing plans for a \$75,000 high school building for the Board of Education, care H. H. Hackney.

Detroit, Mich.—Architects Smith, Hinchman & Grylls are preparing plans for remodeling and building a 2½-story, \$14,000 addition to the Public Library Building for the Public Library Commission.—D. B. Duffield, Secretary.

Duluth, Minn.—Architect C. W. Kelly has completed plans for a 2-story police station.

Ely, Minn.—Architects F. L. Young & Co., Duluth, are preparing plans for a 2-story, \$25,000 school building for the Board of Education.—N. Young, Clerk.

Minneapolis, Minn.—The Fire Department Committee of Council has voted the issuance of \$100,000 of bonds to be expended for the construction and equipping of new engine houses.

The University of Minnesota will erect a building for the College of Engineering, to cost \$250,000; a party of instructors has been inspecting such buildings elsewhere to secure ideas for use in the new structure.

Architect E. S. Stebbins will prepare plans for a school building at Kenwood.

Slayton, Minn.—By a vote of 165 to 108 the district voted \$15,000 bonds with which to build an addition to schoolhouse.

Nevada, Mo.—James Knox Taylor, Supervising Architect, Treasury Department, Washington, D. C., has rejected all bids recently received for a Post Office building and will readvertise for bids.

Palmyra, Mo.—An election will be held April 21 to vote \$75,000 bonds for an infirmary for the care of the county charges.

St. Louis, Mo.—Park Commissioner Scanlan is preparing an ordinance authorizing the erection of a new bathhouse at Seventh and Souard streets, the plans having been agreed upon; the house will cost between \$40,000 and \$50,000, and besides modern bathhouse equipment, the building will also contain a swimming pool.

An ordinance is being considered for the erection of a shelter house and comfort station in Carr Square to cost \$15,000, and two or three shelter houses in other parks to cost about \$5,000 each.

Architects Wessebecher & Hillebrandt are preparing plans for a 2-story school and hall to cost \$20,000.

Architect M. P. McArdle will soon prepare plans for a 2-story school building in St. Louis County to cost \$20,000.

Milligan & Wray, Chemical Building, have prepared plans for additions to insane asylum on Arsenal street for the Board of Public Improvements; W. B. Dryden, Secretary. The structure will have five stories, 469x212 feet, and two wings, and will be built of brick, stone and reinforced concrete; cost, \$600,000.

Superior, Neb.—John Latenser, Omaha, and R. W. Grant, Beatrice, are preparing plans for high school building; cost, \$25,000; contract will be let in about 30 days.—M. L. Pierce, Secretary.

Hackensack, N. J.—The Board of Education will erect a high school building to cost about \$150,000; Architect will soon be selected.

Leonia, N. J.—Architects Davis, McGrath & Shepard, New York City, will receive estimates shortly for a 3-story addition to school building to cost \$20,000.

Montclair, N. J.—Architects Hale & Rogers, New York City, are preparing plans for a 2-story, \$500,000 school building for the Board of Education.

Plainfield, N. J.—Architects Tracy & Swartwout, New York City, are preparing plans for a 2-story police station to cost \$30,000.

Westfield, N. J.—Architect Wilson Potter, New York City, has nearly completed plans and will receive bids about March 1 for a 2-story school building for the Board of Education; cost, \$40,000.

New York, N. Y.—Architect Alexander Stevens has completed plans for alteration to 2-story engine house for the Fire Department, \$34,000.

Rock Mount, N. C.—The Board of Education is offering for sale \$150,000 5 per cent., 40-year school bonds.—Address Clerk of the Board.

La Moure, N. D.—Buechner & Orth, Manhattan Building, St. Paul, Minn., have completed plans for a 2-story Court House to be erected at La Moure for La Moure County; cost, \$100,000.

Columbus, O.—Commissioners of Franklin County, Dr. C. O. Probst, Fred Lazarus and Judge Samuel L. Black, representing the Columbus Society for the Prevention of Tuberculosis, have decided to employ an architect to prepare plans for a hospital for tubercular patients; plans will call for a brick main building of capacity of fifty patients for advanced cases, and frame cottage, with adjustable glass walls, with capacity of thirty patients for those in the earlier stages of the disease; the buildings will cost about \$20,000.

Dayton, O.—Architect Earle W. Russ has completed plans for the 2-story Bumbarger Park building, to cost \$35,000, at Riverdale, for the Board of Education.—William Haeussler, Clerk.

East Cleveland, O.—Architects Seales, Hirsh & Gavin, Cleveland, have been commissioned to prepare plans for a 2-story addition to the Prospect street school.

Marion, O.—An election will be held April 6 to vote on the question of issuing \$100,000 City Hall and Market House bonds. Address City Clerk.

Toledo, O.—School building improvements similar to those made last summer are planned for the coming vacation season; it is probable work will be done on six buildings; the rooms will be redecorated, new heating systems installed and other improvements will be made.

Warrensville, O.—Architects J. Milton Dyer & F. C. Bates, Cleveland, are preparing plans for the first section of the new workhouse; appropriation, \$175,000.—H. R. Cooley, Director Board of Public Service.

Lawton, Okla.—An election will be held in the near future to vote on issuing bonds for the erection of schoolhouse.

Oklahoma, Okla.—Architects Williams & Wells have plans ready for bids for improvements and a \$25,000 addition to the Carnegie Library.

Butler, Pa.—Architects Thomas W. Boyd & Co., House Building, Pittsburg, are preparing plans for alterations and two 3-story wing additions to the Butler Hospital; brick, stone trimmings, hardwood finish, tile and hardwood floors, marble work, tile baths, gas and electric fixtures, lavatories, water closets and bath tubs to cost \$20,000.

McKeesport, Pa.—The Board of Education, W. T. Norton, Secretary, is about to select an architect to prepare plans for the new 12-room school building at River and Butler streets.

Pittsburg, Pa.—Public Works Director A. B. Shepherd has submitted plans for a new market house on the site of the present Diamond market. The building is to be three stories in height with concrete external walls resembling stones. The first two floors are designed for market purposes and are to be lined with enameled brick. The first floor will contain 9,600 feet of stall space and the second floor 12,000 feet, while the third floor is designed for an auditorium. A wide arcade on a line with Market street is designed. It is estimated that the building would cost \$905,100 and yield a revenue of \$115,600 a year. The subject was referred to the sub-committee on Appropriation.

Philadelphia, Pa.—Architects Wilson, Harris & Richards have prepared plans and are about ready for bids for a 3-story, \$200,000 addition to the Academy of Natural Science.

Bath, S. D.—Architect D. C. Washburn, Aberdeen, has plans for a \$10,000 brick school.

Mitchell, S. D.—The citizens will, February 25, vote on the issuance of \$59,000 bonds for the erection of a new high school building.

El Paso, Tex.—The citizens will soon vote on a proposition of issuing \$100,000 bonds for school purposes.

Houston, Tex.—James Knox Taylor, Supervising Architect, Treasury Department, Washington, D. C., has rejected all bids recently received for the construction of an extension to the Post Office at Houston, Tex., and will readvertise for bids on extended plans; the lowest bid was submitted by James A. McGonigle, Leavenworth, Kan., at \$277,870.

Stanford, Tex.—Bonds of \$10,000 have been voted for the erection of school house.—Address Clerk of the Board.

Center Rutland, Vt.—Architect Arthur H. Smith, Rutland, has plans for a 2-story frame and brick-veneered schoolhouse for Center Rutland; cost, \$20,000.—C. Perkins, care Rutland Pulp Plaster Co., is Chairman of Committee.

Montpelier, Vt.—Architect Geo. G. Adams, Lawrence, Mass., is about to let contracts for the 3-story City Hall building for Montpelier; brick, granite and terra cotta, reinforced concrete flooring, structural iron and steel, plate glass, oak finish, interior marble and tile, cement roof, electric fixtures, water closets and lavatories.

Norfolk, Va.—Architects Breese & Mitchell have made plans for a 2-story tuberculosis hospital building.

Petersburg, Va.—Architect Chas. M. Robinson, Richmond, will prepare plans for a

school building for the Board of Public School Commissioners.

Racine, Wis.—The people will soon vote on the matter of issuing \$30,000 bonds for school improvements.—Address Mayor Horlick.

Rhineland, Wis.—The people will, on April 7, vote on the proposition of issuing \$25,000 bonds for the erection of City Hall.

Toronto, Ont., Can.—Plans are being prepared for the proposed School Board offices and the York street school; cost, \$110,000.—R. T. Coady, Clerk.

ELECTRIC RAILWAYS

Atlanta, Ga.—The Atlanta and Carolina Construction Company has been granted a franchise to operate an interurban trolley line through the streets of Augusta.

Chicago, Ill.—The Chicago and Joliet Electric Road is going to erect a new power station four miles from Chicago terminal of the line; estimated at cost of \$5,000,000.

Decatur, Ill.—After more than a year of delay, Council has granted a franchise to the Decatur, Sullivan and Mattoon Transit Company for an entrance into this city for an interurban line from Mattoon to Decatur by way of Sullivan; work on the new line will begin as soon as the weather will permit; right-of-way and franchises have been obtained in the various towns through which the road is to pass.

Springfield, Ill.—The Springfield, Beardstown and Quincy Railway Company proposes to build an electric railway between Springfield, Beardstown, Petersburg and Quincy; the company expects to use the overhead trolley system; it also contemplates locating its power station at Petersburg.—H. H. Colby is President; S. W. Houghton, Vice President; R. E. Bone, Secretary and Treasurer; G. L. Harnsberger, Springfield, Ill., Chief Engineer.

Frankfort, Ind.—Judge J. V. Kemp, of this city, is interested in a company which is being organized to build an electric line from Kokomo to Terre Haute.

Syracuse, Ind.—The Indianapolis, Huntington, Columbia City and Northwestern Railway, which has been in the hands of William L. Self, Syracuse, Ind., as receiver, was sold by order of the Superior Court of Marion County at Warsaw, Ind., to Melvin A. Peoples, Chicago, for two-thirds of the appraised value, the minimum price; this electric road has built five miles of track from Syracuse to Vawter's Park, and has about five miles additional graded toward Goshen, Ind.; the entire projects contemplate connection of Goshen and Huntington by way of Syracuse, Wawasee Lake and Columbia City. Mr. Peoples is acting in connection with Burns & Co. consulting corporation specialists, Isabella Building, Chicago, who propose to reconstruct and extend the road in accordance with the original plan.

Hartley, Ia.—The Sioux City and Spirit Lake Railway Company has been incorporated, headquarters at Hartley, with a capital stock of \$50,000.

Red Oak, Ia.—A project is under consideration by H. E. Deemer and others, of Red Oak, to build an electric railway from that place to Des Moines, 110 miles; surveys have been partly made.

Independence, Kan.—An electric railway is to be built on a number of streets, but work has been delayed, thus necessitating the paving of the thoroughfares, which will probably be done by F. P. Detorle & Co.—W. F. Keller, City Engineer.

Louisville, Ky.—The Louisville Railway Company is going to make improvements that will cost \$200,000 and will also make extensions of lines.

Athens, La.—The Athens Progressive League, recently organized, has appointed a committee to work on the proposition to secure the construction of an electric railway from McNeill, Ark., via Athens, to Natchitoches, La.; an electric railway from Shreveport via Minden, La., to Athens is also contemplated.—E. A. Watson, President; A. G. Pace, Vice-President; Carl Campana, Secretary-Treasurer, and S. J. Crump, Assistant Secretary.

Annapolis, Md.—The Baltimore and Pennsylvania Railway and Power Company has just been incorporated by Wm. Massenhelmer, Chas. J. Wells and others; the company will build electric railways and power plants.

Calumet, Mich.—The Calumet and Lac la Belle Traction and Power Company will build from Calumet, Mich., to Mohawk, Mich., and from Calumet, Mich., to a point in Keweenaw County on Lake Superior; the total length is about 104 miles; surveys have been completed and right-of-way has been obtained by franchise for the most part and other points are now in course of condemnation through the courts; capital for construction is being publicly subscribed; some contracts have been let, but for the most part the company is doing its own work; about two miles of sub-grade have been com-

pleted, poles and ties are now being purchased and orders will be placed for steel the latter part of April.—H. J. Vivian, President; Earl K. Stewart, Chief Engineer.

Ludington, Mich.—M. F. Butters, of this place, is President of the Grand Rapids and Morgan Railway, which was recently incorporated for the purpose of building a railway from Grand Rapids through Eastern Oceanna to Ludington.

New York, N. Y.—The Interborough Rapid Transit Company propose to issue \$30,000,000 bonds for refunding and improvements; \$5,000,000 will be reserved for whatever extensions and improvements may be made in the future; the immediate purpose of the issue is the funding of the money expended for the construction of the Brooklyn and Steinway tunnels.

Grand Forks, N. D.—The Northern Dakota Railway Company will soon advertise for bids for an extension of their line from Edenberg to the Portland cement mines.

Chickasha, Okla.—Scott Jones is interested in a new electric line that is being promoted in Oklahoma from Pauls Valley to Anadarko and a street railway system for this town.

Claremont, Okla.—A franchise has been granted to Geo. Wytell and Joseph McDermott to operate a street railway.

Due West, S. C.—Bids will be received, March 15, for the purchase of \$11,000 5 per cent., 15-20-year railroad bonds.—P. S. Galloway, Town Treasurer.

Christiana, Pa.—Borough Council has granted a franchise to the Conestoga Traction Company for the construction of its proposed 5-mile extension from Christiana to Atglen and to Parkersburg.—H. W. Crawford, Chief Engineer, Lancaster.

Meadville, Pa.—The Central Crawford Traction Company has been organized by citizens of Crawford County for the purpose of building or securing the building of an electric line railway from Longs Stand, four miles east of Meadville, to Clapville, a distance of 20 miles, completing a connection between Meadville and Titusville; a committee of six was appointed to secure the right-of-way, which it is believed will be readily donated; it is then proposed to donate the right-of-way to whatever company will build the line; if no such company is found the Central Crawford Traction Company will build the line.—Dennis Smith, President; Joseph H. Heard, Secretary and Treasurer.

Slatington, Pa.—The Franklin & Townensing Street Railway Company has secured the right-of-way for its line, which is to be nine miles long, extending to Lehigh-ton; construction will be started soon and it is planned to have cars running between Slatington and Bowmanstown this year.—I. W. Cramp, Harrisburg, Engineer.

Chattanooga, Tenn.—The railroad company declined to accept the Rossville avenue street railway franchise on account of the forfeiture provision, which empowered the Board of Public Works to remove the tracks without legal procedure if a certain schedule was not maintained from the beginning of operations; Mayor W. R. Crabtree vetoed the measure and efforts will now be made to reach an amicable agreement with the company.

Clarksville, Tex.—The Texas Union Traction Company has been incorporated with \$2,000 capital by C. P. Moore, A. A. St. John and John Upchurch.

San Angelo, Tex.—Colonel J. H. Ransom, of Hereford, President of the Panhandle Short Line, is interested in building an electric street railway in this city.

Weatherford, Tex.—An interurban line is proposed from Fort Worth to Mineral Wells; Cyrial Smith, of Mineral Wells, can give information.

BRIDGES

Birmingham, Ala.—County Engineer Milner will supervise the construction of nine small bridges to be put up at an early date.

Ensley, Ala.—The United States Steel Corporation will erect steel viaduct across railway track; plans can be procured at the New York office.

Arkadelphia, Ark.—County Judge Joe Hargade will advertise for bids on a new steel bridge to be constructed at McIntosh Bluff on the Little Missouri River.

Atlanta, Ga.—Bids will soon be advertised for on a bridge for Peach Tree Creek; address the Mayor.

Boston, Mass.—City Engineer Jackson is preparing plans for a bridge at Washington street.

Youngstown, O.—City Engineer F. M. Lille is preparing plans for a proposed foot bridge across the railroad tracks at Berlin street.

Altoona, Pa.—Plans have been approved by Council for a bridge at Seventh street.—City Engineer Engstrom.

Milwaukee, Wis.—F. W. Moore, the bridge architect employed by the city, has completed the drawings for the north end of the Twenty-seventh street viaduct and has submitted them to the Board of Public Works.

MISCELLANEOUS

San Francisco, Cal.—Cement and steel wharves will soon be constructed; for further information address Commissioners Stafford and Dennison, of the Harbor Commission.

Santa Monica, Cal.—Council has adopted the plans of Edwin H. Warner, of Los Angeles, for the construction of a reinforced concrete wharf extending into the Pacific Ocean at foot of Colorado avenue, for a distance of 1,600 feet from mean tide line; bids will probably be called for soon.—Thos. H. James, City Engineer.

Albany, Ga.—Proposals will be received March 10 for \$30,000 City Hall bonds, \$15,000 water and sewer bonds, \$15,000 drainage bonds, \$10,000 paving bonds and \$5,000 street opening bonds, all bearing interest at the rate of 5 per cent.—Y. C. Rust, City Clerk.

Washington, D. C.—A report has been received from an American Consul stating that a Canadian city desires to purchase a traction engine, at a cost not to exceed \$5,000, to be used in hauling gravel from a gravel pit owned and operated by the city, a distance of about a mile, to the nearest railroad siding; manufacturers of this class of machinery should send catalogues to the Consul in question.—Address No. 1,936, Bureau of Manufacturers.

In a report to Senator Nathan B. Scott, Chairman of the Senate Committee on Public Buildings and Grounds, the Commissioners have recommended unfavorable action on Senate bill 4320, which provides for the establishment of a public park in the square bounded by Queens Chapel road, Twenty-fourth street, Detroit and Emporia streets northeast; this bill was introduced by Senator Warner, of Missouri, and provides for an appropriation of \$20,000 for the purchase of the land.

Urbana, Ill.—The citizens will vote on the question of issuing \$12,000 municipal bonds.—Address City Clerk.

Winchester, Ky.—A committee from the Commercial Club has requested that Council provide garbage boxes and wagons; the request was referred to the Street Committee.—W. A. Attersall, Mayor.

Detroit, Mich.—Council has directed the Department of Parks and Boulevards to construct a canal on Belle Isle Park, at an estimated cost of \$15,000.—Philip Breitmeyer, Commissioner.

Kansas City, Mo.—Plans to establish a park on the three and one-half acres of ground now occupied by the old General Hospital, which is to be vacated April 1, have been presented to the Park Board.

St. Louis, Mo.—The Board of Public Improvements has estimated improvements about to be made will cost about \$500,000.—A. J. O'Reilly, Secretary of the Board.

Schenectady, N. Y.—It is understood that the erection of a garbage disposal plant will not be taken up this year; the available funds will be pretty well eaten up by other expenditures; while it is realized that a garbage disposal plant is badly needed, it is probable that an effort will be made to get along as well as possible for another year; under the administration of Mayor Clute the agitation for a garbage plant was taken up and a special commission appointed, plans and specifications were drawn up and bids advertised for, but all were rejected on the grounds that the prices quoted were excessive; there was then talk of a bond issue to build a municipal plant, but this was never carried through, although several schemes were talked over.

Ashtabula, O.—The Lake Shore Railway is going to build a subway at Lake street; for further information address Engineer Lewis A. Amsden, City Council.

Defiance, O.—Council has passed two ordinances to issue bonds, one in the amount of \$61,500 and the other for \$3,000.

Enid, Okla.—This city is planning either to turn a ten-acre tract of government land into a park or build a \$100,000 school building on it.

Connellsville, Pa.—Dr. Samuel G. Dixon has called the attention of the Borough Counsel to the numerous communications that have been made in regard to the dumping of garbage into the river, and urging that other disposition be made of the city's waste material; a furnace may be provided.

The Board of Health recently listened to a description of Health Officer Allen Hyatt's odorless garbage wagon and passed a resolution endorsing the same and recommending its adoption by the Borough.—George B. Brown, Secretary.

Pittsburg, Pa.—But one bid was received for the garbage contract of 1908, that of the American Reduction Company, the present contractor, which offered to do the work for \$186,000, or at the rate of \$2.50 per ton.

Park City, Tenn.—An ordinance is before Council authorizing an issue of municipal improvement bonds.—W. R. Johnson, Mayor.

BIDS RECEIVED

Pasadena, Cal.—The following bids were received by Council for furnishing sprinkling wagons: L. R. Tuttle, \$3,475; Newell-Mathews Co., \$3,608; Llewellyn Iron Works, \$4,120; Henshaw, Buckley & Co., \$3,745.

Silt, Col.—The following were the lowest bidders for constructing Garfield County bridge: Wooden joists and concrete abutments—M. J. Patterson, \$13,565, or \$13,050, concrete abutments, own design; Midland Bridge Company, \$13,908; Steel joists and concrete abutments—C. G. Sheely, \$15,517; M. J. Patterson, \$15,670, or \$15,155, concrete abutments, own design. Wooden joists and tubular piers—M. J. Patterson, \$12,030; Joliet Bridge and Iron Company, \$12,440. Steel joists and tubular piers—C. G. Sheely, \$13,339; M. J. Patterson, \$14,135. After opening and reading of the bid of C. G. Sheely, he stated that he had bid on steel joists, although not stated in the proposal; no award yet made. T. W. Jaycox, Denver, State Engineer.

Washington, D. C.—Warren F. Brenizer Company was awarded the contract for constructing a sewer in Fortieth street, between Van Ness and Yuma streets, and in Wisconsin avenue between Van Ness street and River road; in awarding this contract the Commissioners said that the Brenizer Company's bid of \$5,162 was the lowest bid received; the bids were as follows: (a) Warren F. Brenizer Co., Washington, D. C.; (b) E. G. Gummel, 300 Rhode Island avenue, Washington, D. C. Ordinary excavation, (a) 66 cts.; (b) 80 cts.; sewer brick masonry, (a) \$16.50; (b) \$18; 21-inch diameter pipe, (a) \$1.06; (b) \$1.28; 18-inch diameter pipe, (a) 97 cts., (b) \$1.18; 15-inch diameter pipe, (a) \$1 cts., (b) \$1.04; 12-inch diameter pipe, (a) 71 cts., (b) 88 cts.

The bid for the construction of a sewer in Massachusetts avenue between Waterside drive and Observatory circle has been awarded by the Commissioners to E. G. Gummel, whose bid of \$4,393.75 was the lowest received.

The Commissioners have decided to award the contract for furnishing and installing laundry machinery and appliances at the District Tuberculosis Hospital to the American Laundry Machinery Company, of New York, whose bid of \$2,794.50 was the lowest received.

Engineer Commissioner Morrow has approved the recommendation of Building Inspector Ashford that the contract for completion of a well at the Woodburn School be given to the Columbia Pump and Well Company, whose bid of "\$250 is the best obtainable."

Elkhart, Ind.—Bids for Court House furnishings were opened by the County Commissioners; there were six bidders for furnishing furniture for the offices of the Clerk, Recorder, Auditor and Treasurer and for wainscoting for these rooms; the appropriation is \$5,350 and the lowest bid was \$4,600, by the Commercial Cabinet Company; however, this bid could not be considered because the conditions were not up to the specifications; the Brunswick-Balke-Collender Company, of Chicago, filed a bid of \$5,250.

Four bids were filed for supplying the rubber tiling for the court room, among the bidders being Arthur Kelpner, of South Bend, who installed the mosaic floors.

For supplying and installing electric fixtures, Brice Reed, of Elkhart, bid \$2,250 and the Chicago Gas and Electrical Manufacturing Company \$1,750; the amount of the appropriation is \$1,800; Mr. Reed bid in accordance with the specifications, but his competitor submitted special specifications.

The I. X. L. Furniture Company, of Goshen, was the only bidder for furnishing the art glass; it bid \$1,500 the exact amount of the appropriation.

For supplying all the hardware the Hawks Hardware Company, of Goshen, was the only bidder; its price is \$763, and the amount allowed by the appropriation is \$800.

The contracts were let to the Brunswick-Balke-Collender Company, the Hawks Hardware Company, the I. X. L. Furniture Company and the New York Belting and Packing Company; the last mentioned company has contracted to furnish the rubber tiling for \$1,143.

Des Moines, Ia.—The Cook Construction Company were low bidders for the construction of the Thirty-second street sewer, at \$1.40 per lin. ft.

James Horrabin has been awarded the contract for paving West Sixth street and West Seventh street with creosoted wooden blocks at \$2.39 per sq. yd., including 90 feet of curbing and eight sewer intakes.—George D. Dobson is City Engineer.

Independence, Kan.—F. P. Dellone & Co., of Independence and Iowa, were low bidders for paving with Coffeyville brick, manufactured at Independence, on 5-inch crushed rock base, 1 inch screenings, 1 inch sand cushion, filler and asphalt; they will probably be awarded contract within a few weeks; the bid follows: 13100.9 lin. ft. concrete curb and gutter, 65 cents; 554.2 lin. ft. concrete curb, 6 x 14 inches, 35 cents; 30436.1 sq. yds. brick paving, double course, \$1.37; 13100.9 cu. yds. earth excavation, 42 cents; rock excavation, \$2; 1,000 lin. ft. header curbing, stone, 35 cents; 850 lin. ft. 10-inch drain sewer pipe, 75 cents; 13 catch basins, \$35 each.—W. F. Keller, City Engineer.

Lawrence, Mass.—The Water Board has awarded contracts for 10 tons of pipe and a large quantity of cast-iron water pipe; Cornelius F. Lynch was awarded the contract for 10 tons of lead at \$3.98 per 100 and the R. D. Wood Company 10,100 feet of cast-iron water pipe at a figure of \$26.05 per ton for the 4-inch and \$25.05 for the 12, 6 and 8 inch. The aggregate amount of the contracts is about \$6,181.

The bids were as follows: For 10 tons of lead, per 100—C. F. Lynch, \$3.98; C. F. Butler, \$4.10; National Lead Company, \$4.25; Joseph A. Maynard, \$3.99; Charles F. Galvin, \$3.80.

For cast iron pipe: 500 feet of 4-inch, 5,000 feet 6-inch, 3,000 feet of 8-inch, 1,600 feet 12-inch, per ton—Warren Foundry and Machine Company, \$25.25; Lynchburg Foundry Company, \$25.70; E. F. Butler, 4-inch, \$27.70; 3-inch, \$26.70; M. J. Drummond, \$25.20; United States Cast Iron Company, \$25.40; R. D. Wood Company, 4-inch, \$26.05; 12, 8 and 6 inch, \$25.05; John Fox Company, \$25.70; Charles Millar Company, \$25.20; Donaldson Iron Company, \$25.45.

Lynn, Mass.—Bids for the contract for laying smooth paving next summer were received by the Board of Public Works; the Hassam Paving Company, of Worcester, which laid the Summer street pavement two years ago, put in two bids, as did David J. Sheehan Company, of Lynn; other bidders were John E. Burns & Co., Roxbury, Connecticut; Hassam Paving Company, of New Haven; Boston Asphalt Co.; J. H. McLaughlin, Lynn; P. J. McDermott, Lynn; Warren Bros. Company, Boston; W. C. Wittredge & Co., Lynn; Worcester Conduit and Paving Company and the Lynn Granolithic and Construction Company. Coleman Bros., of Boston, submitted a bid ten minutes late.

Detroit, Mich.—The following bids for furnishing brick for paving, repaving, resurfacing and patching streets, were received by the Department of Public Works:

Bidder.	Trade name of block bid upon.	Specification (A)		Specification (B)		Specification (C)	
		Delivered on siding F. O. B. cars per M.	Guaranteed cost per sq. yard.	Delivered on street without guaranty per M.	Guaranteed cost per sq. yard.	Delivered on street with 3 yr. guaranty per M.	Guaranteed cost per sq. yard.
Massillon Stone & F. B. Co.	Hipp's Massillon.	\$19.85	\$0.794	\$21.35	\$0.854	\$21.35	\$0.854
Collinwood D. D. Co.	Collinwood	19.50	.79	21.10	.8550	21.10	.8550
Collinwood D. D. Co.	D. D. B. Co.	19.50	.78	21.10	.8450	21.10	.8450
Malvern Clay Co.	Medal Block.	19.75	.79	21.25	.85	21.25	.85
Saginaw Paving Brick Co.	Saginaw Block.	18.75	.7875	20.60	.8632	20.80	.8736
Logan Brick Mfg. Co.	Logan Block.	20.75	.7885	22.75	.8645	23.75	.9025
F. B. Holmes & Co.	Massillon Block.	19.00	.779	20.60	.8446	20.60	.8446
F. B. Holmes & Co.	Wooster Block.	20.00	.78	21.60	.8424	21.60	.8424
Townsend Brick & Cont'g Co.	Townsend Block.	18.50	.814	20.00	.88	21.00	.924
F. B. Stevens.	Nelsonville	20.25	.83	21.75	.89	22.80	.9350
F. B. Stevens.	"Big Four"	19.50	.78	21.00	.84	22.00	.88
Wassall Clay Co.	Wassall Block.	19.50	.78	21.75	.87	22.75	.91
Metropolitan Paving Brick Co.	Metropolitan Blk.	21.50	.861	23.10	.941	23.60	.967
Metropolitan Paving Brick Co.	Canton Block.	19.15	.785	20.75	.85	21.25	.87
Metropolitan Paving Brick Co.	Minerva Block.	19.25	.77	20.85	.834	21.35	.854

Rochester, N. Y.—Tabulation of bids received by the Board of Contract and Supply shows that Hagaman, Miller & Hagaman are low bidders for the Mt. Hope avenue sewer, their price being \$24,657; other bids and bidders are: Whitmore, Rauber & Vicinus, \$29,570.69; F. V. Brotsch Company, \$34,404.75; F. A. Brotsch & Son, \$36,395.30; F. C. Lauer & Sons Company, \$36,521.80; Thomas Holahan, \$33,852.62; William Fuller, \$37,422; H. B. Hooker & Son, \$37,811.50; Brayer & Albaugh, \$33,959.05. The low bidders have contract.

Bids for Lochner Place sewer are: John J. Regan, \$763.65, low bidder; Bert Bauer, \$918.50; John Retrossi, \$957.50; Frank V. Brotsch Company, \$1,152.50; H. C. Schroeder, \$1,176.75; Julius Friedrich & Company, \$1,220.40; Hater & Ward, \$1,321.60; H. B. Hooker & Son, \$1,341; Brayer & Albaugh, \$1,416.25; F. S. Lauer & Sons Company, \$1,422.45.

John J. Regan has the contract for the Durman street sewer and cement sidewalks, his bid for both being \$2,567. Ripton & Murphy were next with a bid of \$2,640. Queens for the new hospital buildings. The names of the architects have not been made public as yet and may not be until after the plans have been submitted, some time in March next. It is estimated that the hospital buildings will cost \$500,000.

Yonkers, N. Y.—R. D. Wood & Company were awarded contract by the Board of Contract and Supply for furnishing and delivering 410 tons iron pipe at \$23.90 per ton; 10 tons castings at \$53.

Minot, N. D.—Contractor James Kennedy, of Fargo, was low bidder for the contract to put in a complete new water works system, at \$110,465, and Council will probably award the contract. The matter of putting in a water works system has been considered by the city for several years; the city has grown so rapidly that the present system long ago became inadequate.

Dayton, O.—The Board of Public Service has received the tabulated bids on the improvement of Kiefer street, from Daller street to the D. and M. Railroad as follows: George Heckert, grading, graveling and curbing, \$118.80; alley crossings, \$5.33; Karah E. Kunkle, \$204.60 and \$5.33; John Maher, \$211.20 and \$7.33. The bids were referred to City Engineer and Solicitor to ascertain if all and proper legal proceedings had been made.

Dubois, Pa.—The contract for paving the road from the Reynoldsville Borough line up through Winslow Township to the Clearfield County line has been awarded to Hatten & Company, of Dubois; 12,500 feet of the paving will be done with brick, which means that the paving will be brick from the borough line at Cool Spring Hollow up to the Rathmel School House, where the Skunk Hollow road begins; the paving is to be done with State aid; the difference in the cost of putting in the curb will be paid by the Township.

Lancaster, Pa.—Bids for constructing sewers in ten streets were opened recently by the Street Committee of Council, Dr. Caff presiding, under the new law providing for building sewers which specifies about 25 different items to be bid on, including earth and excavation, various sizes of pipe in different materials, etc., etc.; the firms which submitted bids were: Reilly & Riddle, A. W. McWilliams, Herman Schweers, August Schweers, J. U. Fritchey, F. X. Hinden, B. E. Malone and J. Fred Brubaker, trading as Brubaker Company; the bids were ordered tabulated.

Pottsville, Pa.—Contracts for two new State public highways to be built in Schuylkill County, which will cost \$55,000, were awarded to R. A. Simmons, of Pottsville, and Derr & Company, of Allentown.

Washington, Pa.—The following bids, per cubic yard, were received by the County Commissioners for cleaning ditches and resurfacing county roads with broken limestone:

Name of Bidder.	Grading.	Broken Stone		Broken Stone Only.
		Rolled.	Delivered.	
James H. Glenn....	\$0.60	\$3.45	\$2.95	
J. R. Taylor.....	.80	4.50	3.49	
Advance Sand Co....	..	3.85	3.65	
Hallam Const. Co....	1.00	4.50	4.25	
Forsyth Bros.....	.50	..	4.35	
N. C. Hunter.....	.50	3.95	3.50	
ZOLLARSVILLE ROAD				
Hootman Bros.....	\$0.75	\$2.69	\$2.29	
Angelo Carruso....	.62	3.89	3.49	
J. R. Taylor.....	.90	4.50	3.45	
Advance Sand Co....	..	3.85	3.65	
Hallam Const. Co....	1.00	4.50	4.00	
Forsyth Bros.....	.50	..	2.85	
N. C. Hunter.....	.60	4.00	3.65	
BEALLSVILLE ROAD				
Jas. H. Glenn.....	\$0.50	\$2.55	\$2.10	
Hootman Bros.....	.75	2.69	2.29	
J. R. Taylor.....	.80	4.75	3.50	
Advance Sand Co....	..	4.25	4.00	
N. C. Hunter.....	.60	3.25	2.75	

—Wm. Wylie, County Engineer.

Wilkes-Barre, Pa.—With the petitions for paving that have already been presented to Councils and are to be presented, and with the paving that was contracted for but not executed last year, nearly one and one-half miles of hitherto unpaved streets will be paved with vitrified brick on a concrete foundation during the coming year.

An ordinance has already been enacted for the paving of Metcalf street between Hazle and Hickory streets, in the Thirteenth ward, a distance of 600 feet. In this ward also Hutson street between Lehigh and Lana, a distance.

Beaumont, Tex.—The contract for 140,000 cubic yards of clam shell to be used in the construction of 100 miles of shell road in Jefferson County, has been awarded by the County Commissioners to Myrick Brothers Construction Company, Beaumont, and the Frank T. Ireland Company, at \$1 per cubic yard.

Dallas, Tex.—The General Supply & Construction Company has been awarded the contract for repaving 23,600 square yards on Akard street with Thurber brick on a concrete base of gravel mixture five inches thick, with 2-inch cushion of clean sand, at \$2.06 per square yard, without maintenance stipulation.

Norfolk, Va.—Bids were opened at the United States Engineer's office for improving the approaches to the harbor of Cape Charles, and the lowest bidder was L. M. Lewis, address not given, whose bid was \$29,025 for the removal of 135,000 cubic yards at 21½ cents per cubic yard; the appropriation for the work was \$37,000; the contract calls for the removal of 60,000 cubic yards from the approaches to the harbor and 75,000 cubic yards from the inner harbor; the bids will be forwarded to Washington.

Seattle, Wash.—The contract for the grading of Aurora avenue, et al., by grading the same, has been awarded to Holt & Jeffery, 310 Hinkley Block, at a contract price of \$49,423.00.

The following contracts have also been awarded by the Board of Public Works: Ninth avenue, West, et al., concrete sidewalk, to Wm. Neilan & Co., \$9,574.15; Virginia street, planking, H. F. Jahn & Co., \$4,204.75; Virginia street, asphalt paving, Barber Asphalt Paving Company, \$17,492.94; Twenty-fifth avenue, Northeast, grading, Robinson & Beckman, \$756; Railroad avenue, et al., planking, C. Geske & Co., \$29,981.88; alley in Blocks 1 and 2, Crown Add., grading, Josiah Jones, \$3,446; Twenty-fifth avenue, North, et al., grading, P. J. McHugh, \$57,087; Phinney avenue, et al., fire hydrants, \$15,321.75; West Fifty-fourth street, sewer, H. Dahlstrom, \$2,992.45; West Fifty-third street, sewer, Christensen & Nelson, \$1,256; West Fifty-eighth street, sewer, H. Dahlstrom, \$3,295.50; West Fifty-sixth street, sewer, H. Dahlstrom, \$3,484; Third avenue, concrete sidewalks, H. F. Jahn & Co., \$6,431.16; Twelfth avenue, North, et al., grading, Jose Frank, \$11,745; Ballard Avenue, brick paving, Sparger Concrete Company, \$8,936.75.—R. H. Thomson, City Engineer.

Spokane, Wash.—G. Burgie has secured the contract for constructing sewers on Ninth and Tenth avenues at \$10,310.—Charles McIntyre, City Engineer.

Tacoma, Wash.—Stoll & Sweeney have secured the contract for constructing sewers in the north end, at \$31,318.—Frank L. Davis, City Engineer.

McMechen, W. Va.—Rosser & Maloney, Bellaire, O., have been awarded the contract by the city for the construction of about four miles of pipe sewers.—H. M. McElroy, City Clerk, C. C. Smith, Wheeling, Designing Engineer.

Milwaukee, Wis.—The Board of Public Works has awarded the contract to Herman Hokensee for the construction of 2,575 feet of sewer in Pabst and Lisbon avenues, at \$5.37 per foot.—Charles G. Poetsch, City Engineer.

Van Couver, B. C.—The contract for the construction of the wood stave pipe on the Seymour Creek system has been awarded to the Canadian Pipe Company.—W. A. Clement, City Engineer.

Hamilton, Ont., Can.—The following bids have been received by P. W. Southman, Engineer, Hydro-Electric Power Commission, for electric pumps and motors, 25-cycle: The Swedish General Electric Company, \$12,800; Buffalo Steam Pump Company, 490 Broadway, Buffalo, N. Y., \$7,600; Canadian Westinghouse Company, \$15,945; 66-cycle for induction motors: Swedish General Electric Company, \$9,800; Buffalo Steam Pump Company, \$8,500; General Electric Company, \$8,800. The bids are being considered by the Fire and Water Commission. Bids for the pump will be readvertised.

Brandon, Man., Can.—Council has passed a final recommendation to construct reinforced concrete bridge across the Assiniboine River; estimated cost, \$60,000; the bridge will consist of three 90-foot spans with necessary approaches.—W. H. Shillinglaw, City Engineer.

TRADE NOTES

Cast Iron Pipe.—Chicago, Ill. A number of municipalities are in the market for one or two thousand tons. Prospective business in the near future for gas pipe is good. Quotation: 4-inch, \$30; 6 to 12-inch, \$29; 166-inch and up, \$28, with \$1 extra for gas pipe. Birmingham. Order books are well filled and quotations on forward deliveries are being made with some reluctance. Quotations: 4 to 6-inch, \$28; 8 to 12-inch, \$26; over 12-inch, average, \$25, with \$1 per ton extra for gas pipe. New York. Buyers are more generally in the market, and the volume of orders placed represents about the normal for the month. Carload lots of 6-inch sell at \$25 to \$25.50.

Pig Lead.—Market dull. New York and St. Louis both quote 3.75c.

Receiver for Water Works Company.—On petition of the Continental Security Company of New York, J. A. Hawes has been appointed receiver for the Appleton Water Works Company of Appleton, Wis. The Continental is a creditor in the sum of \$10,000.

Contracting Company.—The Mack Paving and Construction Co., Philadelphia, Pa., has filed an application with the Governor of the State of Pennsylvania to improve, alter and amend its charter so as to enlarge its field of activity. It will ask to have its authority defined as follows: "Said corporation is formed for the purpose of grading, curbing, paving or macadamizing, construction and maintenance of any species of street, road or highway, and the furnishing of the materials and labor therefor. And for the purpose of constructing, erecting, equipping, repairing and improving houses, buildings, public or private roads, alleys, tramways, railways, reservoirs, irrigation ditches, wharves, sewers, tunnels, conduits and subways, and furnishing the necessary materials and labor therefor, and generally for the purpose of doing a general contracting business."

Deisel Engine.—The Citizens' Electric Light, Heat and Power Company, Perth Amboy, N. J., has installed a 225-horsepower Deisel crude oil engine in its plant. The engine is of the latest type and capable of developing 25 horse-power more than its rated capacity. It has three extra large cylinders, a deck and runboard and can run at 164 revolutions per minute.

Garbage Company.—The City Garbage Company, Williamsport, Pa., has been formed for the purpose of collecting in a sanitary manner and disposing of garbage. The company has contracted for closed metal wagons.

Concrete Blocks.—The Miracle Pressed Stone Company, Minneapolis, Minn., publishes a large 114-page book on concrete, size of page 9x12, with over 500 illustrations, thoroughly covering the concrete industry. It shows numerous buildings with size and cost; over 100 designs of blocks, the process of manufacturing, the proper mixing, curing, laying and coloring of concrete, and the proper principles of concrete construction, air-space, etc. Full details on the manufacture, sale, use, and the best machines for making double stage air-space building blocks, cement sewer pipe and drain tile, cement brick, ornamental stone, etc. Listing also everything in tools and appliances from a sidewalk jointer to air tamper, and had and power concrete mixers—including also several low-priced single air-space machines.

Proposals

FIRE ALARM SYSTEM.

Titusville, Pa.
Sealed proposals will be received by the City of Titusville, Pa., on the evening of March 2, 1908, at the opening of the session of the Common Council, for installing a fire alarm system in said city. Proposals must be complete as to detail and nature of system, and cover the work of furnishing all materials and doing all the work.

Said proposals to include two indicators for hose houses, one gong for water works, one bell strike for bell tower, and not less than twenty fire alarm boxes.

Proposal must be accompanied by an unconditional certified check, payable to the order of the City Treasurer of said city, in the sum of five hundred dollars, as a guaranty to enter into the contract for the price bid, and in case contract be awarded, bonds for faithful performance must be given with sureties to be approved by and in an amount to be fixed by City Council.

The right to reject any or all bids is reserved.

W. M. DAME,
City Clerk.

(7-8)

CLEANING AND SPRINKLING STREETS

Wilkes-Barre, Pa.
Sealed proposals will be received at City Clerk's office, Wilkes-Barre, Pa., until Friday, February 21, 1908, at 12 o'clock, noon, for cleaning and sprinkling paved streets of said city. Write Fred H. Gates, City Clerk, for specifications.

(7-8)

TEN-TON ROAD ROLLER

Sacramento, Cal.
Bids for a ten-ton street roller of modern and approved type will be received at the office of the City Clerk of the City of Sacramento, California, up to 8 o'clock p.m. on Monday, March 2, 1908, at which time they will be publicly opened. Proposals must be accompanied by illustrations, specifications, and a certified check in not less than 10 per cent. of bid, made payable to City Clerk. Full payment will be made upon establishment of guarantee and acceptance by city. The Board of Trustees reserves the right to reject any and all bids.

M. J. DESMOND,
City Clerk.

(8)

ASPHALT RESURFACING

Chattanooga, Tenn., Feb. 19, 1908.

Sealed proposals, directed to the Board of Public Works, will be received at the office of the Board, City Hall, Chattanooga, Tenn., until 2:30 p.m. March 10, 1908, for resurfacing with asphalt parts of Market, Sixth and Walnut streets; approximate quantities of resurfacing, 10,334 square yards; and brick gutters, 807 square yards. For blank form for proposal and specifications, including form of contract and bond, address Robert Hooke, City Engineer. A certified check for \$2,000, payable to T. J. Gillespie, City Treasurer, must accompany each bid. Bond required of successful bidder of one-half estimated amount of contract.

The right is reserved to reject any or all bids.

H. F. VAN DUSEN,
Chairman.

(8-9)

TEN MILLION GALLON WATER PUMP

Dallas, Tex., January 25, 1908.

Sealed bids will be received at the office of the City Secretary until 3 p. m., Tuesday, March 3, 1908, for one Ten Million Gallon High Service Vertical Triple Expansion Condensing Crank and Fly Wheel Pump, to be erected by the builders. Bids on any type of engine may be submitted, but preference will be given the above described engine. Specifications on file in the office of the City Secretary, City of Dallas, Texas, copies of which will be furnished upon application.

The City reserves the right to reject any and all bids. That with each bid there shall be deposited a certified check for the sum of five thousand (\$5,000.00) dollars, which shall be retained by the City until the successful bidder has entered into contract with the City of Dallas. All unsuccessful bidders' deposit shall be returned to them upon the awarding of the contract to the successful bidder. In the event said successful bidder should fail or refuse to sign said contract and perform the work, according to plans and specifications, after award is made, said certified check shall be retained by the City of Dallas and become the property of the said City.

Envelopes must be marked "Bids on Water Pump."

J. B. WINSLETT,
City Secretary, City of Dallas,
Texas.

FURNISHING AND LAYING SEWER PIPE AND BUILDING SEWAGE DISPOSAL WORKS

Auburn, N. Y., January 27, 1908.

Sealed proposals will be received by the Mayor, Hon. C. August Koenig, until 8 p. m., March 17, 1908, for the construction, first, of sewers and appurtenances thereto; second, for the construction of a disposal works for said sewer system. The sewers to consist approximately of the following: 14,700 feet of 8-inch, 11,300 feet of 10-inch, 6,000 feet of 12-inch, 3,600 feet of 15-inch, 300 feet of 18-inch, 1,250 feet of 20-inch.

Excavation varies in depth from 5 to 18 feet. There will be approximately 16,000 cubic yards of excavation, a part of the same being in solid rock. There will be about 17,000 feet of 5-inch vitrified tile for house sewer connections to be laid from the main sewer to the curb line. There will also be laid in the main trench and underneath the main sewer, as ground water demands, subsoil drains about as follows: 20,000 feet of 4-inch, 6,000 feet of 6-inch, 7,000 feet of 8-inch, 2,000 feet of 10-inch, 200 feet of 12-inch. All of the subsoil drain tile to be vitrified tile known as seconds. 84 manholes with an average depth of 9 feet; 12 flush tanks, 12 lamp holes.

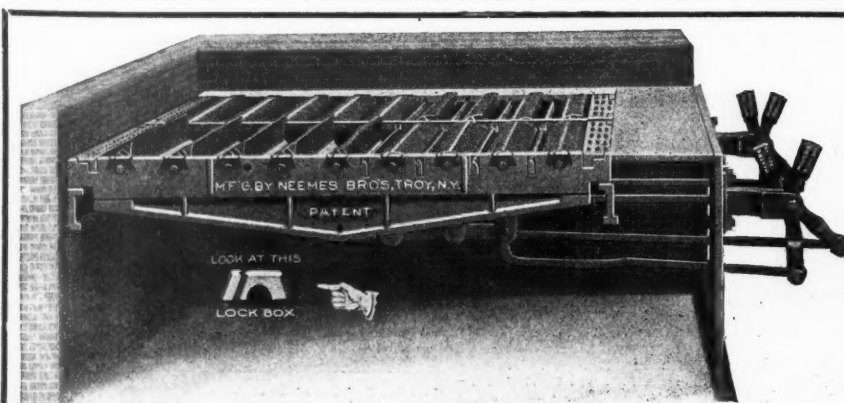
The disposal works consist of reinforced concrete, septic tanks, and contact beds, and automatic appliances for dosing them.

For the sewers a bond for an amount equal to double the gross amount of the contract, or a certified check for \$5,000 will be required of all bidders. For the disposal works a bond for an amount equal to double the gross amount of the contract, or a certified check for \$2,500 will be required of all bidders. The contract will be let in two sections—Section 1 to consist of all sewers and appurtenances to the same, and Section 2 of the disposal works. Bidders may bid on either or both. The Common Council reserves the right to reject any or all bids. Specifications, general plans and blank forms of proposal may be seen at the office of the City Engineer, W. Thomas Wooley (from whom further information may be obtained), and will be ready for distribution February 15, 1908.

J. S. HANLON,
City Clerk.

(6-11)

WE can interest any man with municipal, civil, general or special experience, capable of earning from \$600 to \$5,000, in technical work; write for information and location of nearest Hapgoods, 305 Broadway, New York, or 1010 Hartford Bldg., Chicago.



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Improved Clinker Cutting Grate

It burns anthracite, rice, buckwheat, pea and grate coal and all kinds of soft coal. Our new Lock Box is worth some whole grates. Specially adapted for

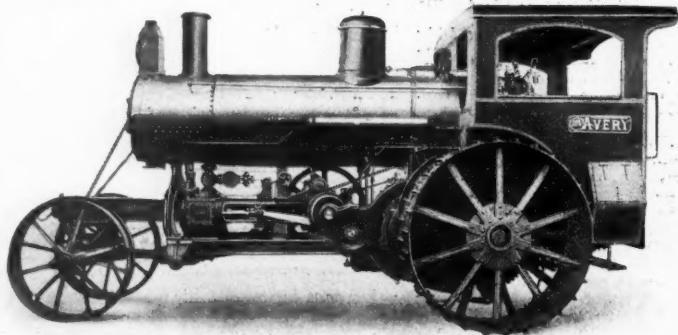
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"Engine far exceeded expectations. Only engine suitable for pulling wagon loader excavators."

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"For simplicity of operation and actual pulling capacity, engine far exceeded our expectations."

THIS ENGINE IS SPECIALLY DESIGNED FOR EXTRA HEAVY TRACTION WORK of all kinds

MORE DURABLE because no boiler strains.
MORE POWERFUL because straight line pull from engine cylinders to load.
MORE CONVENIENT because working parts can be reached from the ground.

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